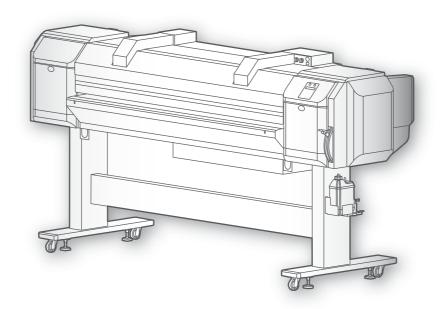




# VJ-1628MH Operation Manual

**Operations and Maintenance Methods** 



- Unauthorized copying or duplication of the whole or part of the contents of this manual is prohibited.
- Every care has been taken in writing the contents of this manual, but please contact MUTOH or the dealer you purchased the product from if you find any unclear, erroneous or otherwise unsatisfactory content in the manual.
- Please be aware that MUTOH will not be liable in any way for failures or accidents that result from handling or operating the printer according to any procedures other than those set forth in this manual.
- Company names and product names that appear in this manual are registered trademarks of the respective companies.

## For Users in Europe



The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives.

By affixing the CE marking, the manufacturer, his authorized representative, or the person placing the product on the market or putting it into service ensures that the item meets all the essential requirements of all applicable EU directives and that the applicable conformity assessment procedures have been applied.

## For Users in the United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



· Keep the work area well-ventilated.

The fumes from ink could adversely impact your health. If you experience headache, fatigue or dizziness, immediately get to fresh air. If nausea persists, seek medical advice.

This equipment is not suitable for use in locations where children are likely to be present.

# Contents

# **Chapter 1 Basic Operations**

	Name of each part
	Menu chart
	System configurations of this product
	Connecting to a Computer
	Launching/Displaying/Finishing MUTOH Status Monitor (MSM)
	Printing area
	Requirements for usable media
	Cautions in using this product
	Head strike prevention sensor
Pov	vering ON / OFF
	Turning the power ON
	Turning the power OFF
Sle	ep Mode
	Starting Sleep Mode
Loa	ding the media
	Loading a roll media in the printer
	Loading a rigid media in the printer
	Individually Canceling Pressurizing Rollers
Noz	zzle check and cleaning
	Nozzle check
	Cleaning
Set	ting the Printing Precision
	Print quality adjustment
	Media feed adjustment
Оре	erating from Operation panel
	Feeding and cutting media
	Pausing / Restarting printing
	Canceling printing.
	Starting printing during warming up
	What you can do on the operation panel during printing
<b>~1~</b>	ar 2 Advanged Operations
νte	r 2 Advanced Operations

Operating the keys to use the menus	
Menu 1: Sleep Mode 6	52
Menu 2: User Type	53
Menu 3: Setup 7	<b>7</b> 6
Set 1: Spitting	76
Set 2: Side Margin	77
Set 3: Take up	78
Set 4: Media Location.	78
Set 5: Origin	79
Set 6: Standby Heating	80
Set 7: Head Travel	80
Set 8: Multi Strike	81
Set 9: Slant Check	81
Set 10: Auto Cleaning	
Set 11: Roll Length	
Set 12: FrontInterlace	85
Set 13: BtmInterlace	
Set 14: Ink Status	
Set 15: Life Times	
Set 16: Header Dump	
Set 17: Start Feed.	
Set 18: Obstacle Check	
Set 19: Initialization	
Menu 4: Test Print	90
Test 1: Nozzle Check.	QΛ
Test 2: Nozzle Check B.	
Test 3: Mode Print	
Test 4: Setup List	
Test 5: Palette	
Menu 5: Cleaning 9	)3
Menu 6: Menu Option 9	)4
Menu 7: Maintenance 9	<b>)</b> 5
Maintenance 1: Daily Maintenance	95
Maintenance 2: Long Storage	
Maintenance 3: Cap Out	
Maintenance 4: Longstore	
Maintenance 5: Color Maintenance	
Menu 8: Version 9	98
Menu 9: Initial	99

	Initial 1: Language
	Initial 2: Length
	Initial 3: IP Address
	Initial 5: Gateway
	Initial 5: Alert Buzzer
	Menu 10: Job Status
Cha	apter 3 Maintenance
	Maintenance104
	Agitating ink105
	Agitating ink
	Checking and replacing ink108
	Checking ink level
	When it becomes time to replace ink
	Replacing ink
	Replacing Adapter's plug for High capacity ink pack adapter
	Emptying waste fluid tank
	Emptying waste fluid tank113
	Daily Maintenance116
	Flow of Daily Maintenance110
	Preparing for Daily Maintenance
	Performing Daily Maintenance
	Continuously using printer after daily maintenance
	Cleaning each part
	Head cleaning128
	Inside cleaning
	Replacing consumable parts131
	Replacing absorption material for the flushing box
	Replacing the cleaning wiper
	Moving or transporting the printer137
	Moving the printer
	Transporting the printer
	Long Storage and Initial Charge139
	If not using the printer for a long period of time
	Performing Long Storage
	Performing initial charging after head cleaning14

# **Chapter 4 Appendix**

Messages and Error Messages	
Status messages	148
Error message display and remedies	151
Error requiring restart	
Troubleshooting	155
Installation and initial setup troubleshooting	155
Boot-up troubleshooting	
Media-related troubleshooting	157
Printing-related troubleshooting	159
The media is jammed	
Specifications of this product	
List of specifications	164
Options / Supply list	167
Revision History	

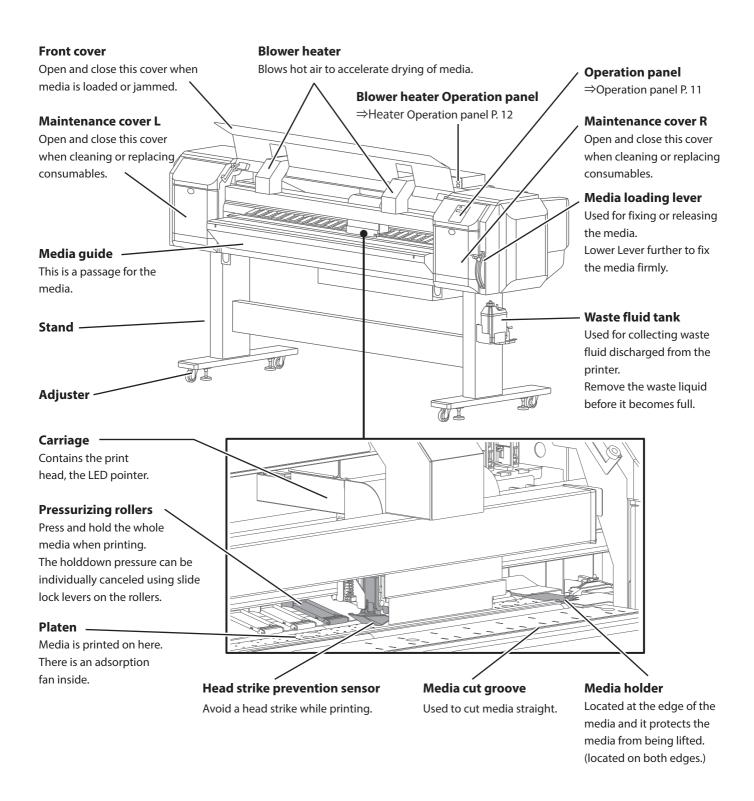
# Chapter 1 Basic Operations

Introduction 9		
Name of each part	9	
Menu chart	13	
System configurations of this product	17	
Connecting to a Computer	18	
Launching/Displaying/Finishing MUTOH Status Monitor (MSM)	19	
Printing area	21	
Requirements for usable media	22	
Cautions in using this product	23	
Head strike prevention sensor		
Powering ON / OFF	27	
T : II ON	27	
Turning the power ON		
Turning the power OFF	27	
Sleep Mode	29	
Starting Sleep Mode	20	
Starting Sleep Mode		
Loading the media	31	
Loading a roll media in the printer	31	
Loading a rigid media in the printer		
Individually Canceling Pressurizing Rollers		
Nozzle check and cleaning	44	
Nozzle check	44	
Cleaning		
Cleaning		
Setting the Printing Precision	47	
Print quality adjustment	47	
Media feed adjustment	49	
Operating from Operation panel	50	
Feeding and cutting media		
Pausing / Restarting printing		
Canceling printing		
Starting printing during warming up		
What you can do on the operation panel during printing	52	

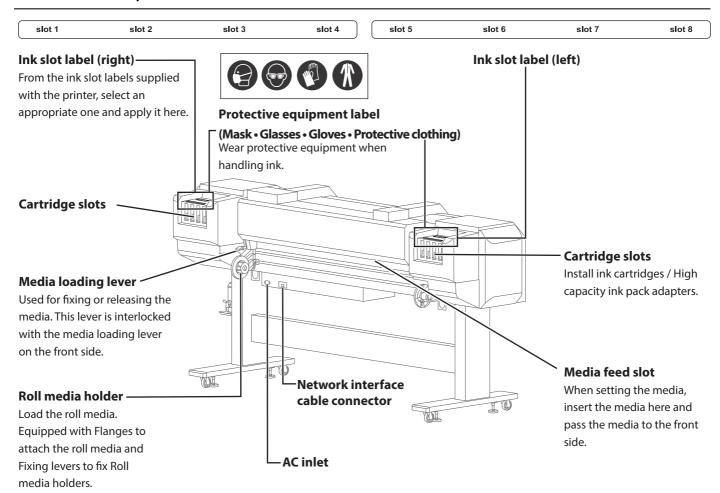
# Introduction

## Name of each part

## Printer's main body (Front side)



## Printer's main body (Rear side)



#### [Power] button

- Pressing this turns the power on. Lights steady in blue when the power is on.
- Pressing this once more turns the power off. Is unlit when the power is off.
- ·Flashes while data is being received, in the sleep mode, and at other times.

#### [Reference]

The (1) symbol means "standby". Even when the power button is not turned on, the printer consumes a tiny amount of power so long as the power cable is connected. This state is referred to as the power being "off" in this Manual.

#### [Heater Link] indicator

Lights steady green when the Blower heater is set to "Printer Link".

#### [Origin] indicator

Lights steady green when the Origin setting is activated.

#### [Media Type] indicator

- Roll Media: "Roll" indicator is ON.
- Rigid Media: "Rigid" indicator is ON.

#### [Menu] key

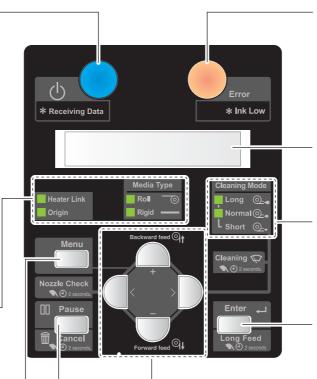
Used for accessing and exiting the menu.

#### [Pause] / [Cancel] key

- •Press this key to pause printing.
- ·Holding this key pressed down for two seconds or longer will cancel the print job and delete the data received.

When setting the menu:

•Cancels a change of a setting value.



#### **Error indicator**

- ·Lights up in orange when an error has occurred or a cover is open.
- •Flashes when the ink is low.

#### **Display**

Displays the printer status, setting menu, errors and so on.

#### [Cleaning Mode] indicators

Light steady green to indicate the head cleaning mode.

#### [Enter] key

When you have set a media in place, pressing and holding this down for two seconds or longer will run a media feed.

When setting the menu:

- Press this to go to the menu item you select.
- Press this to confirm a set value.

## [+] key / [Backward feed] key

Media is fed in the backward direction.

When setting the menu:

- Press this to move to another menu item
- Press this to change a set value.

#### [-] key / [Forward feed] key

Media is fed in the forward direction.

When setting the menu:

- Press this to move to another menu item
- Press this to change a set value.

#### [<] key / [Nozzle Check] key

Pressing and holding this down for two seconds or longer will run a nozzle check.

When setting the menu:

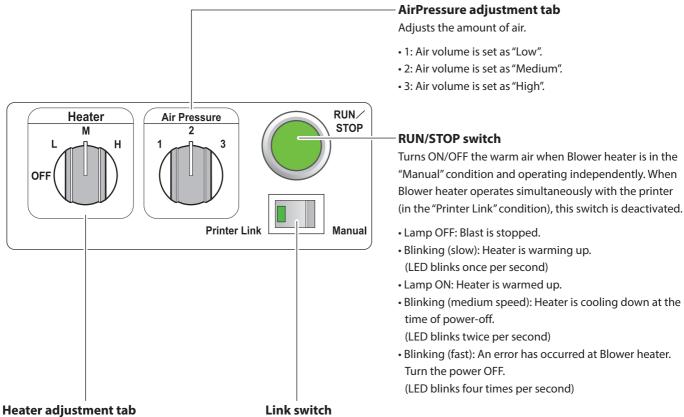
• Press this to change a set value.

## [>] key / [Cleaning Mode] key

- •For changing the cleaning mode.
- Pressing and holding this down for two seconds or longer will execute head cleaning.

When setting the menu:

- Press this to move to a lower level of menu items.
- Press this to change a set value.



Adjusts the heater temperature.

- OFF: Heater is not turned on.
- L: Heater temperature is set as "Low".
- M: Heater temperature is set as "Medium".
- H: Heater temperature is set as "High".

Switches whether or not to set Blower heater to operate simultaneously with the printer.

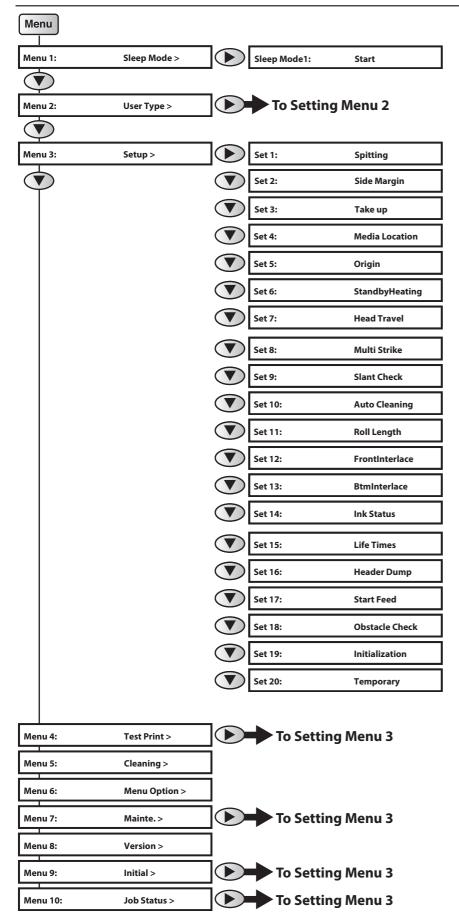
- Printer Link: Blower heater operates simultaneously with the printer.
- Manual: Blower heater starts up independently, allowing the user to turn ON/OFF.
- The communication error between Blower heater and Printer has occurred. Turn the printer OFF if it's ON. Operate the printer in Manual mode if it's status is ON. (LED lamp blinks twice per second.)
- A Blower heater error has occurred. Turn the printer OFF. (LED lamp blinks about four times per second.)

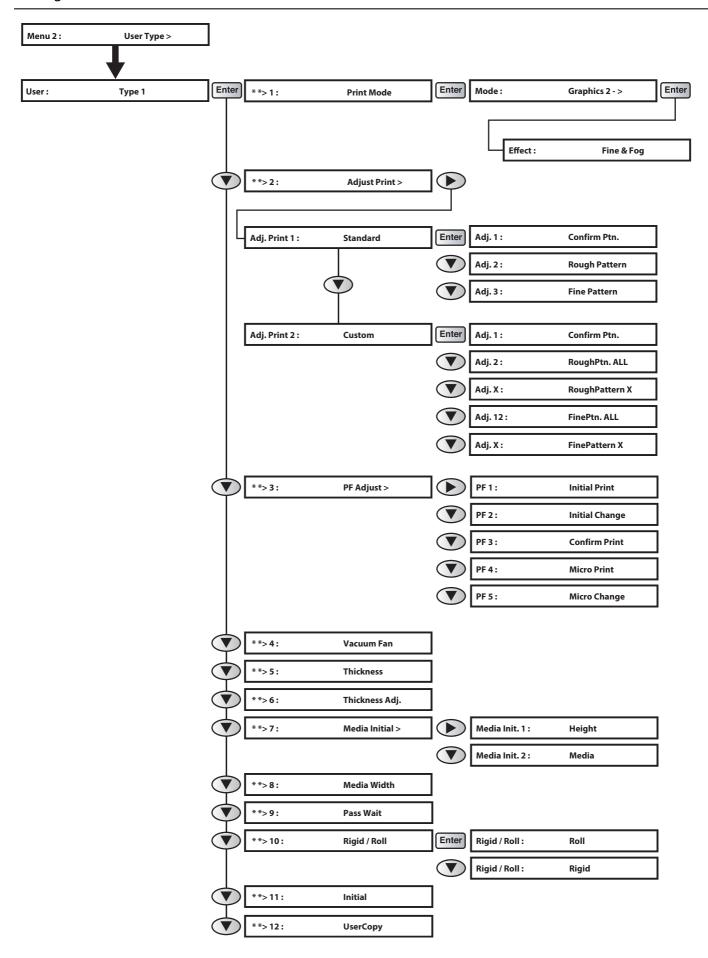


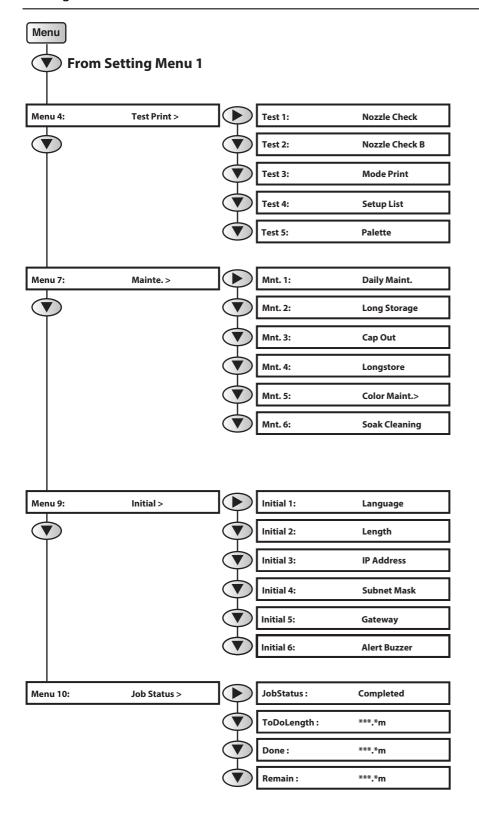
If an error has occurred at Blower heater in the Printer Link mode, "Heater Error" is displayed on Operation panel as well.

## Menu chart

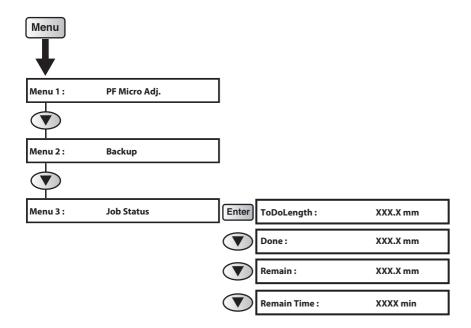
## Setting menu 1



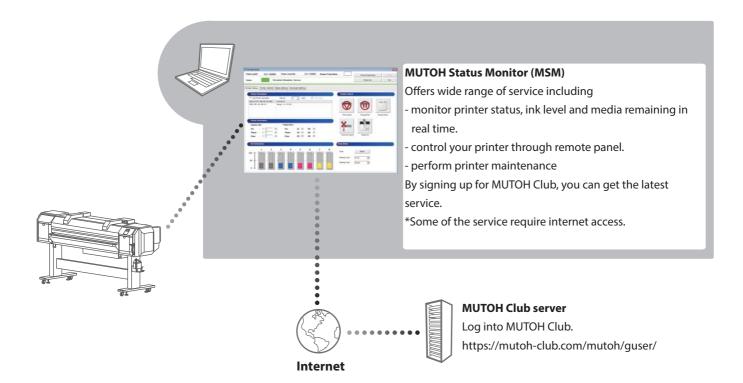




# Menu during printing



# System configurations of this product



#### \*1 MUTOH Club

By signing up for MUTOH Club, it offers free useful contents including

- download the latest version of application, operation manual
- download media profile
- check printer information (printer information uploaded through MSM can be viewed)

## Connecting to a Computer

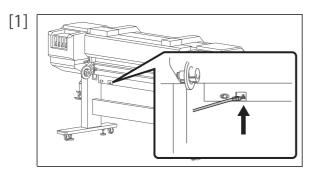


Make sure your computer meets the following requirements.

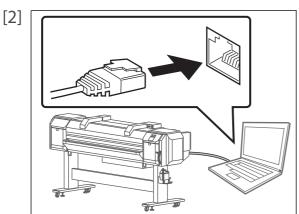
• OS: Windows 11



- The OS support period of MUTOH software follows the Microsoft support lifecycle policies.
- When using RIP software, please also see the system requirements of your RIP software.



Connect the Ethernet cable to the product.



Connect the Ethernet cable to the computer.

[3] Use the printer operation panel to set the IP address, subnet mask and gateway.

Initial 3: IP Address" P. 100, "Initial 4: Subnet Mask" P. 101, "Initial 5: Gateway" P. 101



- The above illustration is the example of peer-to-peer connection between this product and computer. Connection method differs depending on the usage environment.
- If you use the product with a LAN, connect the cable so that the computer and printer are on the same subnet.

# Launching/Displaying/Finishing MUTOH Status Monitor (MSM)

## Launching MSM



## Windows 11

Double click the MSM icon on the Desktop.



Launching from the Start Menu of Windows

From the [Start] menu, click [All Programs] (or [All Apps]) - [MUTOH] - [MUTOH Status Monitor].

## Displaying MSM



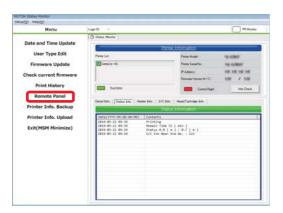
Double click the MSM icon in the task tray.

## Displaying remote panel

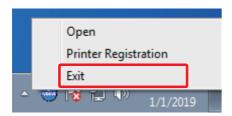
The remote panel is used to view this product's status or operate.

Click [Remote Panel].

• The remote panel opens.



## Finishing MSM



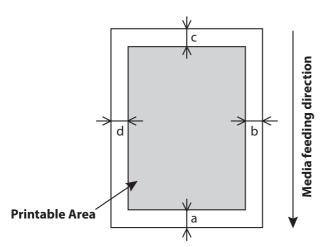
Right click the MSM icon in the task tray, and click [Exit].



When using normally, do not finish MSM. When closing the MSM window, click [Settings] - [Close].

# Printing area

Printing is always started from Origin position (print start point). See the figure below as example.



a=5 mm \*1 b=5 mm to 25 mm c=5 mm d=5 mm to 25 mm

- $^{*1}$  The value of "a" will be 15 mm in the following cases:
  - Immediately after media initialization
  - When feeding the media by using the [Backward] key

The value of "a" will be 40 mm in the following cases:

• When Media Initial menu is set to "Top&Width"

## Requirements for usable media

Media that meet the requirements below can be used with this printer.

#### Usable sizes

## When using Roll media

Outer diameter	150 mm or less
Media tube diameter	2 inches or 3 inches
Weight	30 kg or less
Maximum width	1,625 mm
Minimum width	182 mm
Maximum thickness	16 mm (warpage of less than 1 mm)

## When using Rigid media

Length	200 mm to 1,200 mm
Weight	15 kg or less
Maximum width	1,625 mm
Minimum width	182 mm
Maximum thickness	16 mm (warpage of less than 1 mm)



To use rigid media, prepare the media-feed table.

## Cautions for handling media

To achieve expected print quality, follow the instructions below.

Failure to follow these instructions could result in damage to the printer.

- Be cautious of expansion and contraction of media from temperature and humidity.

  After opening an unopened media, leave the media for approximately 1 hour to adjust to environments.
- Do not use media with folds, scratches, tears, curvatures, winding curl and weaving.

  If the media has folds or curls on the end, use the media holders to hold the media flat on the platen.
- Do not leave a roll media set in this product for a long time.
   The media can be curled becoming unsuitable for printing.
   When not using for a long time, remove a roll media and store in its original package box.

## Cautions in using this product

#### Do not turn the power off

Use the printer with its power turned permanently on. When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. In the sleep mode, the printer will periodically circulate the ink inside the printer and carry out head cleaning automatically. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.



If you need to leave the printer unused for extended period of times (more than one month), please contact your local MUTOH

#### Agitate the ink cartridges (ink bags)

Before installing a new ink cartridge (ink bag), invert the ink cartridge (ink bag) back and forth to agitate ink.

Periodical ink agitation is also required when prompted on the operation panel.

Otherwise, the ink inside the cartridges (bags) settles or coagulates and may cause poor print quality or a malfunction.

#### Please use this product periodically

It is recommended to use this product once a week.

When left unused for a long time, the print head nozzles can get clogged causing damage.

#### Conduct periodic maintenance

This product requires daily maintenance.

- Perform the Nozzle check before and after printing. If nozzle missing is found, conduct a head cleaning.
- Make sure to perform daily maintenance after you finish printing for the day. Failure to perform daily maintenance may affect print quality or result in damage to the printer.

Toally Maintenance" P. 116

- Drain waste fluid in the waste fluid tank periodically before it becomes full.
- · When this product is not used for a long time (a week or more), conduct a head cleaning once a week.
- · Clean its inside once a month.

## Please handle ink bag carefully

- Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.
- Before operation, make sure to read the Material Safety Data Sheet (SDS).
- Do not disassemble Ink cartridge (Ink bag). If disassembled, there is a possibility that ink might come into contact with your eyes or skin.
- DO NOT drop or hit an ink cartridge (ink bag). Ink may leak from the cartridge (bag).
- When handling the ink cartridge (ink bag), be careful not to let the ink get in your eyes or on your skin. If the ink gets in your eye or on your skin, immediately wash it off with water. If not, it could cause bloodshot eyes or light inflammation. Should any anomalies occur, immediately seek medical attention.
- Be sure to use the ink before it expires. The expired ink should be disposed of as industrial waste. The empty ink bag should be put in a plastic bag and should be disposed of according to the local regulations.

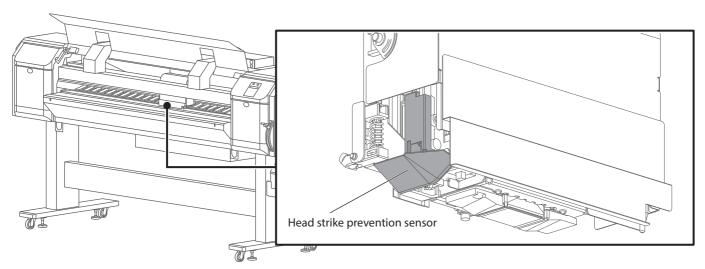
## Some parts need to be replaced periodically

In this product, there are some parts required to be replaced after a long-term use.

- Parts required to be replaced by users: Absorption material for the flushing box, Cleaning wiper
- Parts required to be replaced by service personnel: Various motors, Pumps, Print head

## Head strike prevention sensor

This printer has the head strike prevention sensor to protect the print head.



| Important!

The sensor is designed to protect the print head from a head strike. It cannot prevent the media from touching the print head due to the roll media warp.

If the media warps, use the media holders or change the vacuum fan setting to hold the media flat on the platen.

\*\*Yafter loading the media..." P. 34, "\*\*>4: Vacuum Fan" P. 73

#### When the sensor detects obstacles

## **During media initialization:**

- [1] When it senses obstacles, the carriage stops moving.
  - Then the carriage moves up to the top and goes back to the capping station.
- Obstacle Detection -> E

The message on the left will appear.

- [3] Remove the obstacle and press the [Enter] key.
- [4] Reload the media.

#### While printing:

- [1] When it senses obstacles, the carriage stops moving.
  - Then the carriage moves up to the top and goes back to the capping station.
- [2] The message on the left will appear.
- [3] Remove the obstacle and press the [Enter] key.
- [4] The message on the left will appear.

   Press the [Enter] key to cancel printing.

To resume the job, use the [+]/[-] key to select the message "Print [5] **Print Restart?** Yes Restart? Yes", and then press the [Enter] key. The message on the left will appear. [6] Change: X.X mm -> • Use the [+]/[-] key to adjust the head height for the media, and then press the [Enter] key. The message on the left will appear. [7] Is it preserved? No • To enable the value entered only for the current job and not to save the changes, press the [Enter] key. To overwrite the thickness adjustment value in the user type with the [8] Is it preserved? Yes value entered, use the [+]/[-] key to select the message "Is it preserved? Yes", and then press the [Enter] key.

- [9] The printer restarts printing.
  - If the sensor detects an obstacle again, the message "Obstacle Detection ->E" will appear on the panel. Adjust the head height for the media.
  - If this problem persists repeatedly, select the message "Print Restart? No" to cancel the job and check that the sensor works properly.



- · When the sensor detects an obstacle, remove it. If the problem persists repeatedly, check that the sensor works properly.
- If ink stains on the bottom of the sensor, follow the steps below to remove it. If the ink deposits, it cannot detect obstacles properly.

  "Continuously using printer after daily maintenance" P. 126, "How to clean the head strike prevention sensor" P. 123

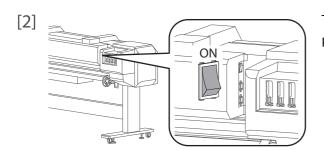


Mutoh cannot guarantee the quality of the print when the job was paused or resumed as the head strike prevention sensor was tripped.

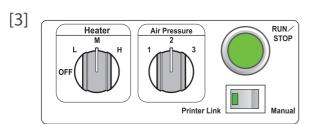
# Powering ON / OFF

## Turning the power ON

[1] Close the front cover.



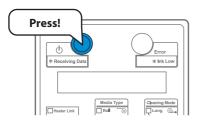
Turn ON the power switch of blower heater on the rear side of the printer.



Turn Link switch of Blower heater on the front of the printer to "Printer Link".

• Link switch blinks.

[4]



Press the power button to turn the power ON.

- The blue light becomes ON.
- This product starts its initialization operations.

## Turning the power OFF



Use the printer with its power turned permanently on. When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.

**Sleep Mode** P. 29 **Sleep Mode** ■ P. 29

When you may not be able to run a weekly cleaning on the printer that is in sleep mode:

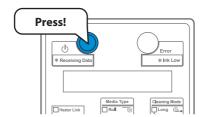
Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days).

TLong Storage and Initial Charge" P. 139

- [1] Check that the printer completes printing and no media is loaded.
- [2] Prepare items required for daily maintenance.

**Preparing for Daily Maintenance** P. 117

[3]



Press the power button to turn the power OFF.

- This product starts its powering off operations.
- The blue light becomes OFF.

[4] Daily Maint.:

Press the [Enter] key.

[5]

Cleaning \*\* %

Start

The printer automatically performs the cleaning.

Wait for a while

 The carriage and cleaning wiper move to gain access to daily maintenance.

[6]

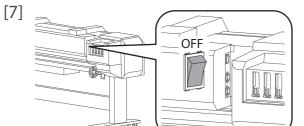
Daily Maint. : End

The message on the left will appear.

- You can start daily maintenance.
   "Performing Daily Maintenance" P. 119
- After the daily maintenance is complete, press the [Enter] key.

Power Off Printer

The printer will start turning off.



Turn OFF the power switch of Blower heater.

# Sleep Mode

When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.

Make sure to follow the instructions on the operation panel to perform daily maintenance.

## | Important!

- When you may not be able to run a weekly cleaning on the printer that is in sleep mode:
   Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days).
  - TLong Storage and Initial Charge" P. 139
- If the printer is going to be in Sleep mode for more than 1 week, follow the steps below to perform daily maintenance once a week.
- · Invert the ink cartridges back and forth to agitate ink.
  - **Gamma "Agitating ink" P. 105**
- · Wake the printer from sleep mode.
- · Perform a nozzle check to see if there are no nozzle missing.
- Perform daily maintenance, and put the printer into sleep mode.

## Starting Sleep Mode

#### Steps

- [1] Make sure that the printer's operating condition is as follows:
  - The front cover and the maintenance cover are closed.
  - · No media is loaded.
  - The remaining ink level is sufficient.
  - No ink agitation message is prompted.
  - · No other messages are displayed.
  - The waste ink tank has enough space.

## | Important!

If you are going to use the sleep mode for a prolonged period of time, first empty the waste ink tank.

[2] Prepare items required for daily maintenance.

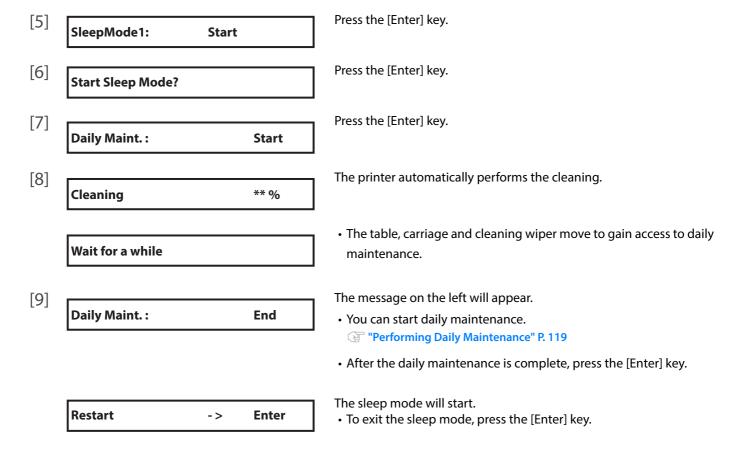
Preparing for Daily Maintenance" P. 117

Press! Roll Claning Chord Normal Ca. L Short Cleaning Cancel Pause Forward feed Cancel Cancel Cancel Cleaning C

Press the [Menu] key.

[4] Menu1: Sleep Mode >

Press the [>] key.





- The power button flashes in blue while the printer is in the sleep mode.
- It may take some time for Blower heater to stop because it has to cool down.
- Stop Blower heater manually in Manual mode.
- Depending on the time elapsed since the last automatic cleaning, the printer may perform an automatic head cleaning or ink charging when waking up from sleep mode, powered on, or before printing. Such operation does not depend on the sleep mode settings. It is an automatic maintenance function of the printer.



The following message appears on the operation panel when the printer has been in sleep mode for one week.

• "Perform Nzl Chk -> E"

Follow the steps below to run a nozzle check and ensure that all nozzles are firing properly.

- Press the [Enter] key to wake up from sleep mode.
- Follow the instructions on the operation panel to invert the ink bag back and forth to agitate ink.
- · Load a media to print a nozzle check pattern and perform a nozzle check.

"Nozzle check" P. 44

· If nozzle missing is found on the nozzle check print, perform the head cleaning.

**Cleaning**" P. 46

Then, put the printer into sleep mode again.

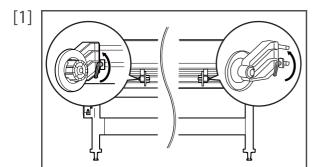
# Loading the media

## Loading a roll media in the printer

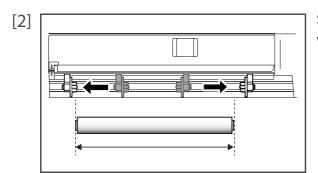


Depending on the type of the media, we recommend that two or more persons set the media.

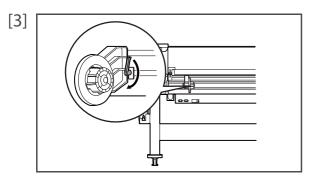
## **1.** Loading Roll Media onto the Roll media holder



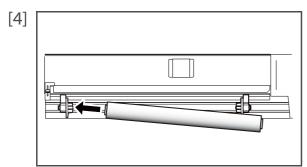
Loosen Fixing levers on the Roll media holders (both left and right) on the back of the printer.



Set the distance between Roll media holders wider than the actual width of the roll media to be set.

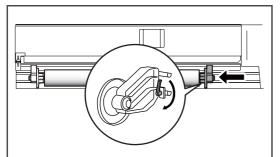


Tighten Fixing lever of Roll media holder (left) and fix the Roll media holder (left).



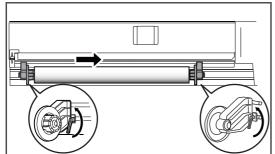
Set the roll media to Roll media holder (left).

[5]



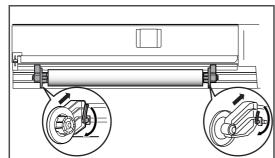
Attach Roll media holder (right) to the roll media and tighten Fixing lever

[6]



Loosen the Fixing levers of the right and left Roll media holders, move the roll media to the center.

[7]



Press Roll media holder toward the printer and fix the Fixing levers.

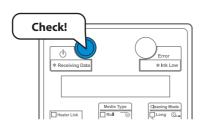


When tightening Fixing lever, press Roll media holder toward the printer.

If you do not press Roll media holder, Fixing lever may not be completely locked because of the weight of the roll media.

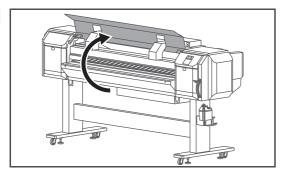
## **2.** Loading Roll Media into the printer

[1]



Make sure that the printer is turned ON.

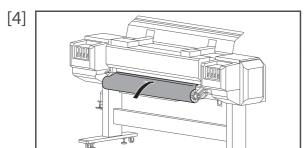
[2]



Open the front cover.

[3]

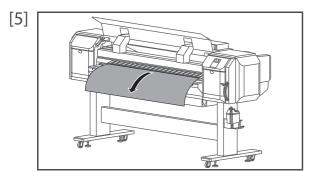
Raise the media loading lever.



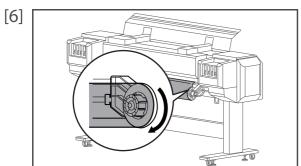
Load the roll media to Media feed slot.



If the end of the roll media is not wound tightly, wind it tightly again, and then load it.



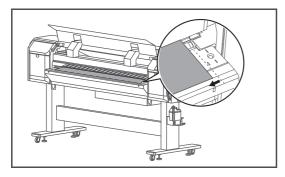
Pull the roll media out about 1 m from the front Media feed slot.



Rewind the roll media a little by rolling Flange on Roll media holder while holding the edge of the media, and eliminate any slack or slant.



If you set the roll media free while rewinding, the roll media may fall out from Media feed slot and fall toward the back of the printer.



Confirm that the right edge of the roll media does not go beyond the loading mark. If it does, it may affect print quality.

[7] If needed, use a slide lock lever on the pressure rollers to individually cancel the holddown pressure.

**"Individually Canceling Pressurizing Rollers" P. 42** 



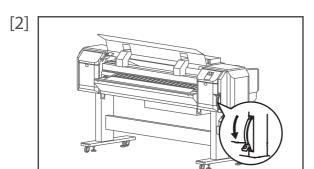
Normally you do not need to adjust the holddown pressure by the slide lock levers.

To print on thin or soft media, individually reduce the holddown pressure.

# **3.** After loading the media...

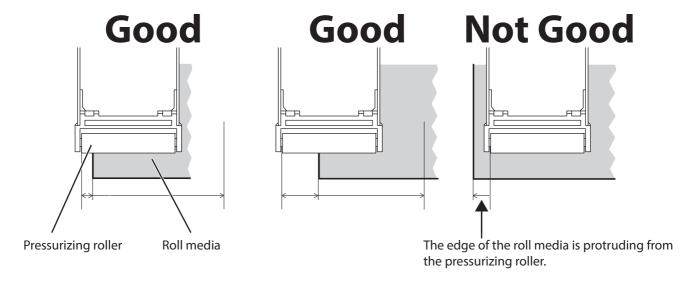
[1] Lever Up

"Lever Up" is displayed on the Operation panel.

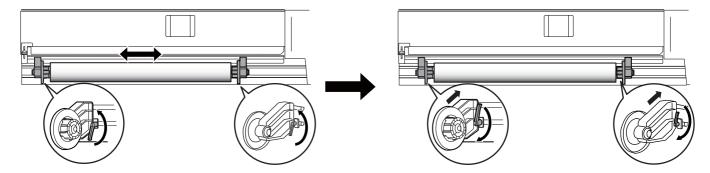


Lower the media loading lever.

[3] Make sure that the edges of the media is appropriately pressed by Pressurizing rollers.

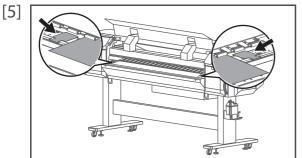


- When the media is not appropriately pressed by Pressurizing rollers, follow the procedure to adjust the position of the [4] roll media.
  - Raise the media loading lever.
  - Loosen Fixing levers of the right and left Roll media holders, and move the roll media to left or right.
  - Press Roll media holder toward the printer and fix the Fixing levers.





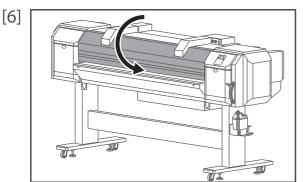
- If the media is not appropriately pressed by Pressurizing rollers, the media may be misaligned or creased during printing.
- When tightening Fixing lever, press Roll media holder toward the printer. If you do not press Roll media holder, Fixing lever may not be completely locked because of the weight of the roll media.



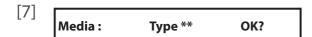
Set the media holder at both edges of the media.

## Important!

With the default settings, the printing operation starts 5 mm from the edge of the media. To hold down the media, make sure that the part overlapping the media is less than 5 mm in length.



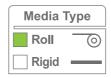
Close the front cover.



"Media: Type \*\* OK?" is displayed on the Operation panel.

- Press the [+] key or [-] key on Operation panel to select the User Type Setting.
- Check that the media type in the selected user type is set to "Roll".

\*\*>10: Rigid / Roll" P. 75



| Normal @\_e L Short @\_e L Sho

Press the [Enter] key to execute media initialization.

• That ends the media loading procedure.

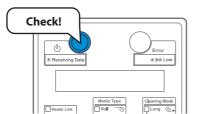
## Loading a rigid media in the printer



Depending on the type of the media, we recommend that two or more persons set the media.

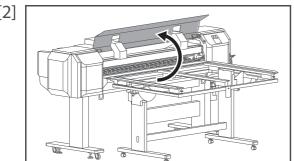
### 1. Loading Rigid Media into the printer

[1]



Make sure that the printer is turned ON.

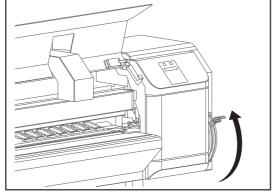
[2]



Open the front cover.

Before installing the media-feed table, always open the front cover. If the cover is closed, the printer may not work properly.

[3]



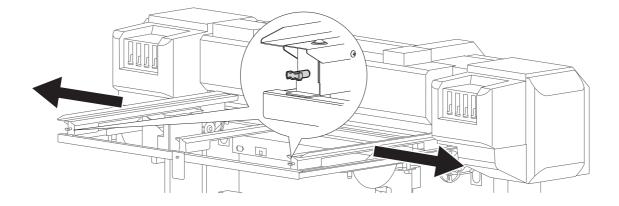
Raise the media loading lever.

### Note

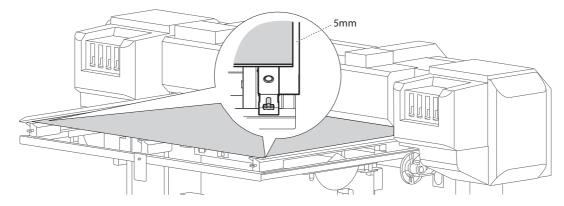
Media-feed table is excluded from the illustration for simplicity.

Loosen the rail retaining screw on Media-feed table (rear side), and widen the rails to the sides so that you can place [4] the rigid media.

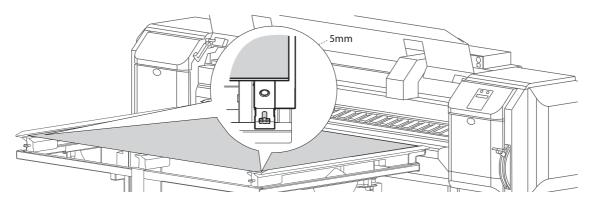
Make sure that the rigid media is set on the center of the printer.



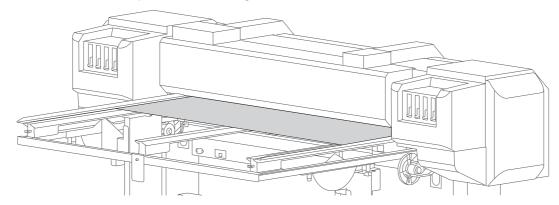
[5] Place the rigid media on the rails and tighten the rail retaining screw at where there is a 5 mm gap between the stoppers on both sides and the media.



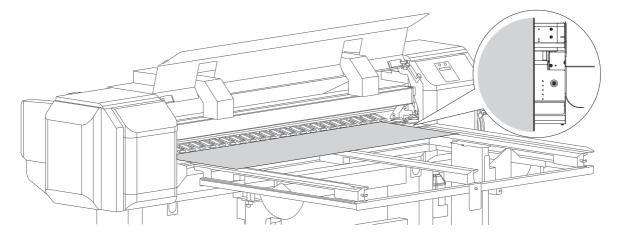
[6] Place the rigid media on Media-feed table (front side) in the same way, and fix the rails at where there is a 5 mm gap between the stoppers on both sides and the media.



[7] From the rear side of the printer, insert the rigid media into Media feed slot.



[8] If the right edge of the roll media goes further right from the loading mark when seen from the front, adjust the position of Media-feed table's rails.



[9] If needed, use a slide lock lever on the pressure rollers to individually cancel the holddown pressure.

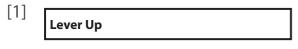
**"Individually Canceling Pressurizing Rollers" P. 42** 



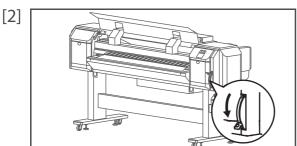
Normally you do not need to adjust the holddown pressure by the slide lock levers.

To print on thin or soft media, individually reduce the holddown pressure.

### **2.** After loading the media...



"Lever Up" is displayed on the Operation panel.



Lower the media loading lever.

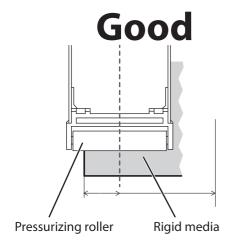


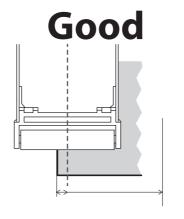
Media-feed table is excluded from the illustration for simplicity.

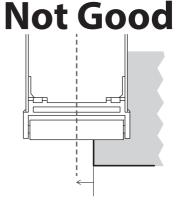
[3] Make sure that the edges of the media is appropriately pressed by Pressurizing rollers.

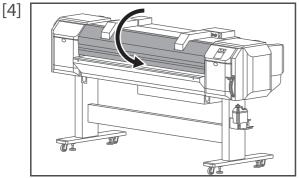
More than 50% area of the pressurizing roller on the far left and right should hold down the edge of the media.

If not, adjust position of the rail on the media-feed table.









Close the front cover.



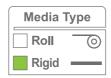
Media-feed table is excluded from the illustration for simplicity.

[5] Media: Type \*\* OK?

"Media: Type \*\* OK?" is displayed on the Operation panel.

- Press the [+] key or [-] key on Operation panel to select the User Type Setting.
- Check that the media type in the selected user type is set to "Rigid".

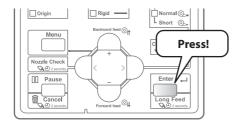
\*\*\*>10: Rigid / Roll" P. 75





If the media type is not set to "Rigid", go to "Menu 2: User Type >" - "User: Type\*" - "\*\*> 10: Rigid / Roll" and select "Rigid".

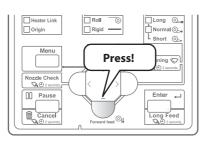
[6]



Press the [Enter] key to execute media initialization.

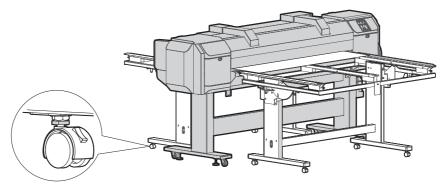
• That ends the media loading procedure.

[7]

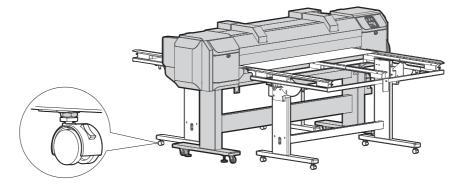


Press down the [-] key on Operation panel for a while, and check that the rigid media can be fed no problem.

[8] When feeding does not go smoothly, turn the screws of the front and back casters of Media-feed table (4 places each) with a spanner and raise the height slowly to adjust the position for smoother feeding.



- [9] Use a spanner and tighten the hexagon nuts of the caster's height adjuster (4 places) toward the Media-feed table side.
  - The height of the caster is fixed.



### **Individually Canceling Pressurizing Rollers**

The pressurizing rollers incorporated in this printer can be individually disabled.

Once the roller is canceled, it does not hold the media when the media setting lever is in the DOWN position.

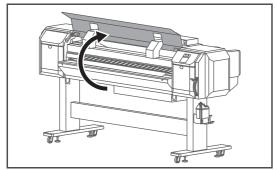
You can use this function when

- · printing on a thin or soft media.
- using a jig to print on the media and you want to disable the pressurizing rollers on the jig.



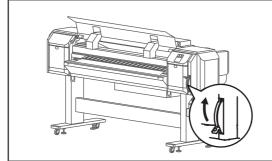
Printing on a thin or soft media can easily cause wrinkle on the media, leading to head strike and smears on the media. To prevent this problem, it is recommended to evenly disable the pressurizing rollers.





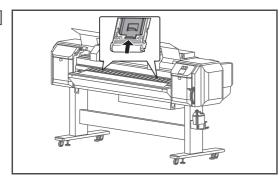
Open the front cover.





Raise the media loading lever.

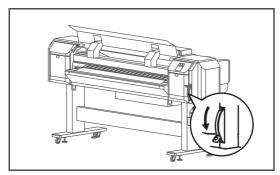
[3]



Cancel the pressurizing rollers.

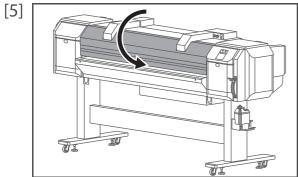
- To cancel the roller, fully slide back the slide lock of the roller.
- If you are printing on a thin or soft media, cancel the slide lock lever on every two or three pressurizing rollers.
- If you are using a jig for printing and you do not want to apply pressure on it, cancel the slide lock levers on that area.

[4]



Lower the media loading lever.

Close the front cover.



[6] Perform media feed adjustment.

**™ "Media feed adjustment steps"** P. 49



 $When \ disabling \ the \ rollers \ to \ prevent \ smears \ on \ the \ media, it \ is \ recommended \ to \ equally \ cancel \ the \ rollers \ on \ both \ sides. \ If \ the \ problem \ still \ persists, \ disable$ more rollers.

## Nozzle check and cleaning

Before starting everyday operation, please perform nozzle check printing to check the print head condition. If nozzle clog is found, perform cleaning.

This printer offers the following two kinds of nozzle checks:

- Nozzle Check Prints the nozzle check patterns.
- Nozzle Check B Prints the nozzle check patterns on the partially colored background.



- "Nozzle Check B" will only appear in the menu on the printer with 5-color or 8-color ink configuration.
- When using white ink, colored media, transparent films or semi-transparent films (such as OHP film, tracing paper and more) are recommended to use for nozzle check.

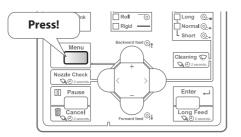
### Nozzle check

### Nozzle check steps

[1] Load the media for Nozzle check.

**Transport** "Loading the media" P. 31

[2]



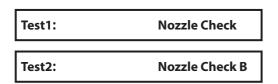
Press the [Menu] key.

[3] Menu 4: Test Print >

Press the [-] key several times, to bring up the display on the left.

• Press the [>] key.

[4]

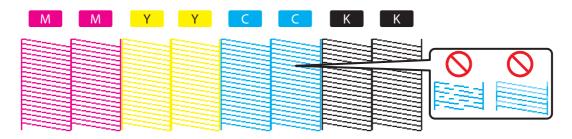


Press the [Enter] key.

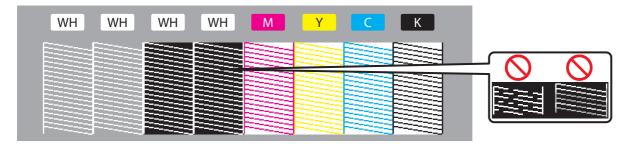
- To select Nozzle Check B, press the [-] key to display "Nozzle Check B", then press the [Enter] key.
- Nozzle check patterns will be printed.

#### [5] Check the print result.

- If there is nozzle missing, go to "Cleaning steps" P. 46.
- If all lines are clearly printed, you can start printing.
- The figure below is an example of the 4-color setting Nozzle Check patterns.



- Nozzle Check B is printed on the partially colored background.
- The figure below is an example of the 5-color setting Nozzle Check B pattern. In this example, non-colored background area is shown in gray.



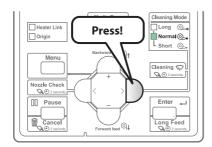


The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

## Cleaning

### Cleaning steps

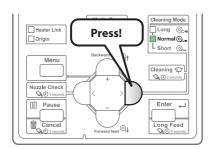
[1]



Press the [Cleaning] key, so that the "Normal" indicator (one of the "Cleaning Mode" indicators) lights steady.

• The cleaning mode will be set to "Normal".

[2]



Press the [Cleaning] key for more than two seconds.

· Cleaning will start.

[3] Conduct a nozzle check, again.

"Nozzle check steps" P. 44

• If there is still nozzle missing, repeat normal cleaning.

See "Head cleaning" P. 128 regarding "Short", "Long", "Little Charge" and "Initial Charge" cleaning.

## Setting the Printing Precision

Before starting to print for the first time, adjust the printing precision.

### Print quality adjustment

It is used for optimizing the quality of image prints.

Adjustment methods for this printer are as follows.

Adj. Print 1:	Standard
---------------	----------

Adjusts only the print mode used by the current user definition. When you have adjusted the print mode using Standard, make the resolution, pass count, and print direction of the print mode on the RIP side equal to those of the userdefined print mode.



Allows you to adjust also a print mode other than the print mode used by the current user definition.

This method optimizes print quality even if the print mode on the RIP side is different from the user-defined mode.



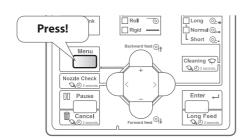
- · When newly setting or changing the user type setting after adjusting Standard adjust print, make sure to adjust print.
- When you change the print mode after performing the Standard adjustment, make sure to perform the Standard adjust print for the selected print mode.
- The Custom adjust print can adjust the print quality for all print modes at once. If you have already performed the Custom adjustment, there is no need to perform it again even if you change the print mode.
- When specifying a print mode for RIP software, etc, that is different from the mode set in the usertype setting, perform Custom print quality adjustment and check all patterns (A to F), and then adjust any patterns that are misaligned beforehand.

### Print quality adjustment steps

[1] Load the media.

**"Loading the media"** P. 31

[2]



Press the [Menu] key.

[3] Menu 1: Sleep Mode >

Press the [-] key.

[4] Menu 2: User Type >

Press the [>] key.

User: Type 1

Use the [+] / [ - ] key to select a user type.

• Press the [Enter] key.

[6] \*\*> 2: Adjust Print >

Press the [-] key several times, to bring up the display on the left.

• Press the [>] key.

Adj. Print 1: Standard

Adj. Print 2: Custom

Select the adjustment method with the [+] / [ - ] key.

• Press the [Enter] key.



• In Standard print quality adjustment and Custom print quality adjustment, the names in the available patterns are different. For details, refer to the page below.

Tadj. Print 1: Standard" P. 66

"Adj. Print 2: Custom" P. 67

• For a pre-adjustment check, select "Confirm Ptn.".

Check the printing results in "Confirm Ptn.",

- To adjust large misalignment, select "Rough Pattern".
- To adjust small misalignment, select "Fine Pattern".
- [8] Follow the steps below and adjust the print quality.

<sup>™</sup> "Steps" P. 68

### Media feed adjustment

This adjustment is necessary when:

- you use this product for the first time.
- · you change the type of the media.
- · you cancel the pressurizing rollers individually.

In other cases, proceed to "Nozzle check" P. 44.

For this adjustment, you need a ruler. Use a commercially available ruler.



If you encounter any of the following problems with the printing results, you may be able to solve them by adjusting the media feed.

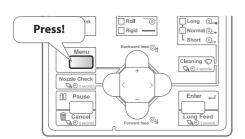
- · Printed images overlap.
- White lines are printed over images.

#### Media feed adjustment steps

[1] Load the media.

TLoading the media" P. 31

[2]



Press the [Menu] key.

[3] Menu 1: Sleep Mode >

Press the [ - ] key.

[4]

Menu 2: User Type >

Press the [>] key.

[5]

User: Type 1

Use the [+]/[-] keys to select a user type.

• Press the [Enter] key.

[6]

\* \*> 3: PF Adjust >

Press the [-] key several times, to bring up the display on the left.

• Press the [>] key.

[7]

PF 1: Initial Print

PF 2: Initial Change

PF 3: Confirm Print

PF 4: Micro Print

PF 5: Micro Change

Use the [+] / [ - ] key to select a menu.

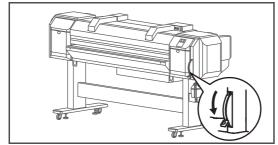
- Press the [Enter] key.
- Follow the steps below and adjust the print quality.

<sup>™</sup> "Steps" P. 70

## Operating from Operation panel

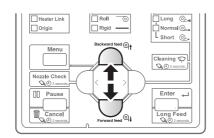
### Feeding and cutting media

[1]



Check that Media loading lever is lowered.

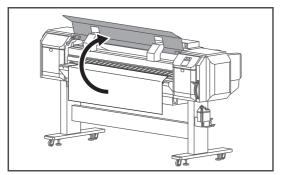
[2]



Press the [Forward] key or the [Backward] key on Operation panel.

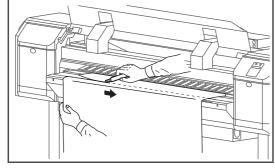
- [Forward] key: The media is fed forward.
- [Backward] key: The media is fed backward.
- [3] Release the [Forward] key or the [Backward] key on Operation panel after feeding the media to the desired position.

[4]



Open the front cover.

[5]



Place a razor blade on the media cut groove on the media guide, and cut the roll media.

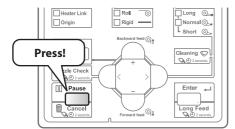
### **A** CAUTION



Pay attention to the following points when you cut roll media. Mishandling the razor blade may cause a cut on your finger or hand.

- When you hold media, do not place your finger on the media cut groove.
- Move the razor blade along the media cut groove.

### Pausing / Restarting printing



To halt printing, press the [Cancel] key.

- The printing pauses.
- To resume printing, press the [Enter] key.



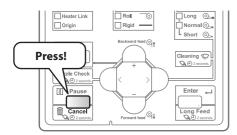
- In this operation, printing data sent to the product are not deleted.
- Please see the followings when canceling printing and deleting data.





Mutoh cannot guarantee the print quality when you resume the print.

### Canceling printing



Press and hold the operation key on the operation panel for two seconds or more during printing.

- The printing is canceled (it cannot be restarted).
- The printing data sent to the product are deleted.



You can alternatively do this via the printer driver or the MSM's remote panel.

### Starting printing during warming up

#### Steps

[1] Warming Up

Confirm that the printer is warming up.

• "Warming Up" is displayed on Operation panel.

[2]



Print data will be sent.

• "Warming Up" and "Skip -> Enter" is displayed on Operation panel.

## **A** CAUTION



While "Warming Up" is displayed, do not touch Media guide.

You could burn yourself.

- [3] Press the [Enter] key on the operation panel.
  - The printer starts printing.

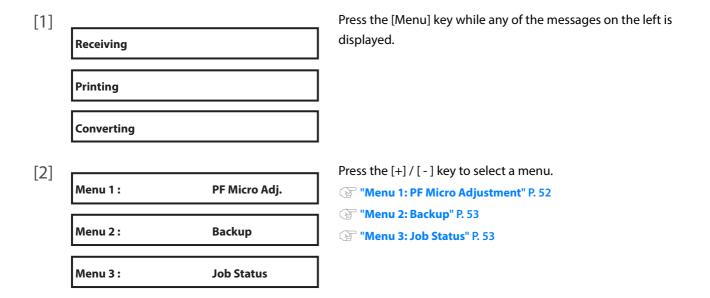


If you start printing during warming up, print quality will not be guaranteed.



Even when you start printing during warming up, warming up continues until the temperature reaches the set temperature.

### What you can do on the operation panel during printing



### Menu 1: PF Micro Adjustment

With this menu item, you can alter the micro-adjustment value for the feed correction. The alteration will be valid for the current printing only.

• See the following related sections of Panel Setting Menus:



[1] Menu 1: PF Micro Adj.

Press the [Enter] key.

[2] Micro: 5.00%

- Use the [+] / [ ] key to change the setting value.
- Press the [Enter] key to set the changed value.



- The changed value set with this menu item will become invalid when the printing
- To have the change reflected in the currently selected User Type, save it using "Menu 5: Backup".

### Menu 2: Backup

With this menu item, you can have a change that you made via "Menu1: PF Micro Adj." reflected in the currently selected User Types.

Press the [Enter] key.

[2] Update Parameter?

The setting value will be saved.

\* Parameter Updating \*

#### Menu 3: Job Status

This menu item displays data on the job being printed.

• See the following related sections of Panel Setting Menus:

"Menu 10: Job Status" P. 102

[1]	Menu 3 :	Job Status
[2]	ToDoLength:	XXX.Xm
	Done:	XXX.Xm
	Remain:	XXX.Xm
	Remain Time :	Xmin

Press the [Enter] key.

Use the [+] / [ - ] key to select a menu item.

- ToDoLength: display this to check the total length (media feed direction) of the job being printed.
- Done: display this to check how much of the current job has been printed.
- Remain: display this to check how much of the current job remains to be printed.
- Remain time: displays the time remaining to complete the print job.



- The values displayed by this function are approximate. They are not guaranteed to be rigorously accurate.
- If the print job data contains no length information, "0" will be displayed for all these items.

# Chapter 2 Advanced Operations

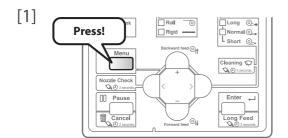
Introduction 5	/
Operating the keys to use the menus	
Menu 1: Sleep Mode 6	2
Menu 2: User Type 6	3
Menu 3: Setup	6
Set 1: Spitting	76
Set 2: Side Margin	
Set 3: Take up	78
Set 4: Media Location	78
Set 5: Origin	
Set 6: Standby Heating	
Set 7: Head Travel	
Set 8: Multi Strike	
Set 9: Slant Check	
Set 10: Auto Cleaning	
Set 11: Roll Length	
Set 13: BtmInterlace	
Set 14: Ink Status	
Set 15: Life Times	
Set 16: Header Dump	
Set 17: Start Feed	38
Set 18: Obstacle Check	39
Set 19: Initialization	39
Set 20: Temporary 8	39
Menu 4: Test Print9	0
Test 1: Nozzle Check.	90
Test 2: Nozzle Check B.	
Test 3: Mode Print	€1
Test 4: Setup List	€1
Test 5: Palette	}2
Menu 5: Cleaning 9	3
Manu 6: Manu Ontion	1/1

Menu 7: Maintenance	95
Maintenance 1: Daily Maintenance	95
Maintenance 2: Long Storage	95
Maintenance 3: Cap Out	
Maintenance 4: Longstore	96
Maintenance 5: Color Maintenance	97
Menu 8: Version	98
Menu 9: Initial	99
Initial 1: Language	99
Initial 2: Length	
Initial 3: IP Address	99
Initial 4: Subnet Mask	100
Initial 5: Gateway	100
Initial 6: Alert Buzzer	100
Menu 10: Job Status	101

## Introduction

Using the panel setting menus, configure various kinds of settings for the printer.

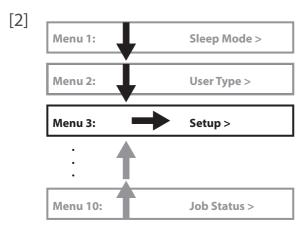
### Operating the keys to use the menus



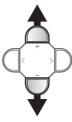
To access the panel setting menus, press the [Menu] key.



You cannot access the panel setting menus while printing or receiving data (the power button is flashing).

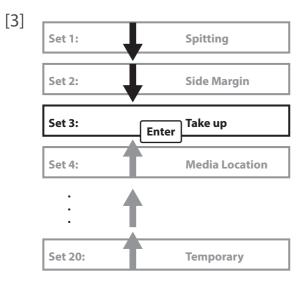


Use the [+] / [ - ] key to scroll through the menus.

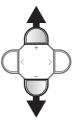


Press the [>] key to access the menu you are on.





Use the [+] / [ - ] key to select submenus, enter numeric values and so forth.



Press the [Enter] key to set/execute.



Use the [Cancel] key to return to the menu/submenu.

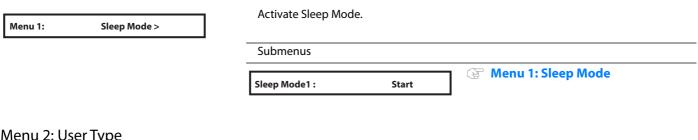
(In the case shown on the left, pressing [Cancel] key will return to

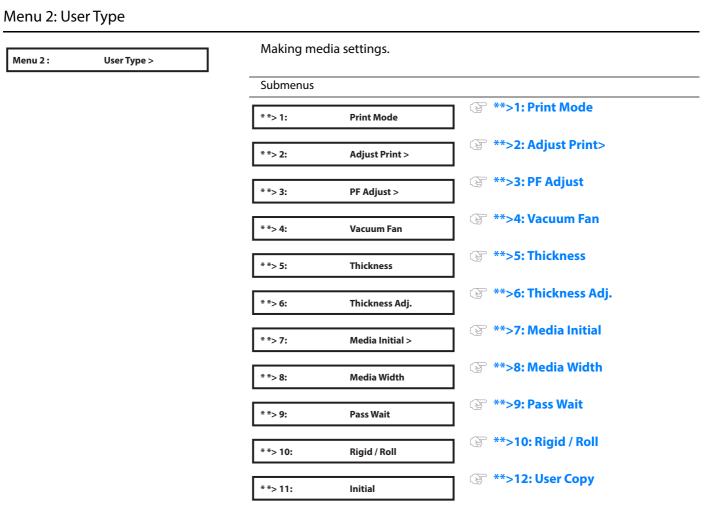
"Menu 3: Setup>".)



### Panel setup menu

### Menu 1: Sleep Mode





Menu 3: Setup

enu 3:	Setup >	Various se	Various settings of the printer are configured.			
		Submenu	Submenus			
		Set 1:	Spitting	Set 1: Spitting		
		Set 2:	Side Margin	Set 2: Side Margin		
		Set 3:	Take up	Set 3: Take up		
		Set 4:	Media Location	Set 4: Media Location		

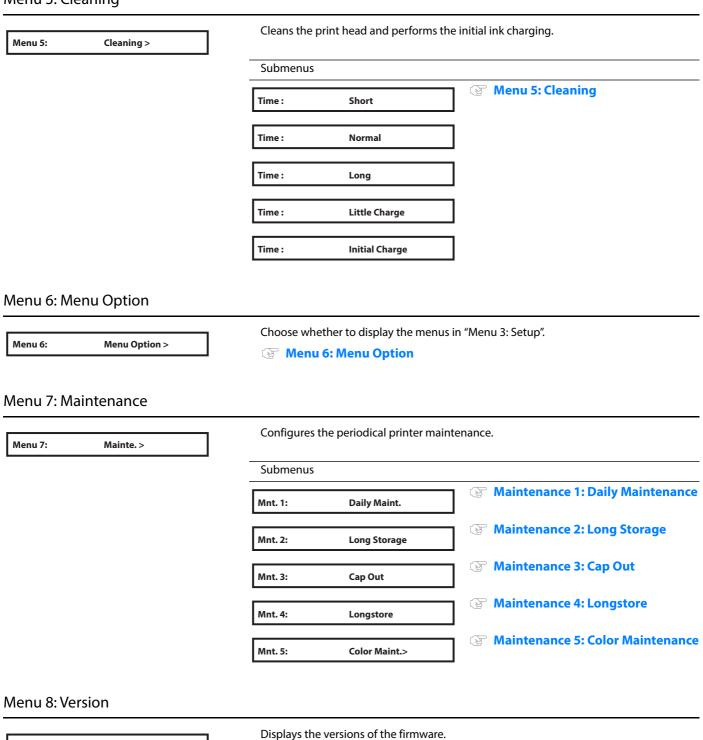
		☐ Set 5: Origin
Set 5:	Origin	
Set 6:	StandbyHeating	Set 6: Standby Heating
		☐ Set 7: Head Travel
Set 7:	Head Travel	Jet 7. Head Havel
Set 8:	Multi Strike	Set 8: Multi Strike
		→ ■ Set 9: Slant Check
Set 9:	Slant Check	
Set 10:	Auto Cleaning	Set 10: Auto Cleaning
		Set 11: Roll Length
Set 11:	Roll Length	
Set 13:	BtmInterlace	Set 12: FrontInterlace
Set 13:	Btminterlace	Set 13: BtmInterlace
Jet 13.	Diffilliteriace	□
Set 14:	Ink Status	
Set 15:	Life Times	Set 15: Life Times
		→ Set 16: Header Dump
Set 16:	Header Dump	
Set 17:	Start Feed	Set 17: Start Feed
		→ Set 18: Obstacle Check
Set 18:	Obstacle Check	
Set 19:	Initialization	Set 19: Initialization
		→ Set 20: Temporary
Set 20:	Temporary	

Menu 4: Test Print

Menu 4:	Test Print >		Performs nozzle check of the print head and setup list.		
		Submenus	Submenus		
		Test 1:	Nozzle Check	Test 1: Nozzle Check	
		Test 2:	Nozzle Check B	Test 2: Nozzle Check B	
		Test 3:	Mode Print	Test 3: Mode Print	
		Test 4:	Setup List	Test 4: Setup List	
		Test 5:	Palette	Test 5: Palette	

"Nozzle Check B" will only appear in the menu on the printer with 5-color or 8-color ink configuration.

### Menu 5: Cleaning



**Menu 8: Version** 

Menu 8:

Version >

#### Menu 9: Initial



Sets the interface language and units, to set up the network, or to configure the menu display settings.

Submenus

Initial 1: Language **☞ Initial 1: Language** 

Initial 2: Length **☞ Initial 2: Length** 

Initial 3: **IP Address**  **☞ Initial 3: IP Address** 

Initial 4: **Subnet Mask**  **☞ Initial 4: Subnet Mask** 

Initial 5: Gateway **☞ Initial 5: Gateway** 

Initial 6: Alert Buzzer **☞ Initial 6: Alert Buzzer** 

#### Menu 10: Job Status

Menu 10: Job Status > Displays various information of previous print.

Menu 10: Job Status

## Menu 1: Sleep Mode

Menu 1: Sleep Mode >

Activate Sleep Mode.

Make sure to follow the instructions on the operation panel to perform daily maintenance.

<sup>™</sup> "Sleep Mode" P. 29

Submenu

Sleep Mode 1 : Start

Press the [Enter] key to start Sleep Mode.



During Sleep Mode, even if the set amount of time has passed, Head cleaning is not performed under the following circumstances.

- When the front cover is open.
- When the maintenance cover is open.
- The waste fluid tank is full.
- Ink cartridges or High capacity ink pack adapters have been removed.
- The inserted S/C card is not the genuine S/C card, etc.

If one of the above conditions occurs during Head cleaning, cleaning is stopped.

When the printer returns to a normal state, Head cleaning is restarted.

## Menu 2: User Type

Menu 2: User Type > You can have up to 30 groups of User Type, labeled "Type1" to "Type30". When you select a User Type group ("Type") and press the [Enter] key, that definition group will be set for the printer. Also, a submenu will be displayed.

Setting values Select a "Type" number, from "Type1" to User: Type 1 "Type30".



When you change to another User Type, all the settings that can be set via the User Type will be changed. When using the printer for the first time or when changing the media, configure the items for the User Type.

User: Type 1 Making media settings.

Submenus		
* *> 1:	Print Mode	**>1: Print Mode
* *> <b>2:</b>	Adjust Print >	**>2: Adjust Print>
* *> 3:	PF Adjust >	**>3: PF Adjust
* *> 4:	Vacuum Fan	**>4: Vacuum Fan
* *> 5:	Thickness	**>5: Thickness
* *> 6:	Thickness Adj.	**>6: Thickness Adj.
* *> 7:	Media Initial >	**>7: Media Initial
* *> 8:	Media Width	**>8: Media Width
**>9:	Pass Wait	**>9: Pass Wait
* *> 10:	Rigid / Roll	**>10: Rigid / Roll
* *> 11:	Initial	**>12: User Copy

\* \*> 1: **Print Mode**  Making settings for print mode.

- Pressing the [>] key while a mode is displayed will bring up detailed information on that mode (resolution, number of passes, print direction), which will be displayed for as long as the key is held down.
- After setting the print mode, go on to setting of effect.

Setting valu	ies	
Mode:	Quality X ->	Sets up to perform high quality printing.  There are four patterns: Quality 1 to Quality 4.
Mode:	Graphics X ->	Sets up to perform standard printing.  There are two patterns: Graphics 1 and Graphics 2.  Graphics 2 is the initial setting.
Mode:	Banner X ->	Sets up to perform high-speed printing.  There are two patterns: Banner 1 and Banner 2.

### **Details of print mode**

Print Mode	Resolution	Pass	Direction	Initial values for effect
Quality 1	1440 × 1440	16 pass	Uni (unidirectional)	Fine & Fog
Quality 2	1440 × 1440	16 pass	Bi (bidirectional)	Fine & Fog
Graphics 1	720 × 1440	8 pass	Uni (unidirectional)	Fine & Fog
Graphics 2	720 × 1440	8 pass	Bi (bidirectional)	Fine & Fog
Banner 1	720 × 1080	6 pass	Bi (bidirectional)	Fine & Fog
Banner 2	720 × 720	4 pass	Bi (bidirectional)	Fine & Fog

#### **Effect**

Mode: Graphics 2 -> Sets up the Effect menu.

Set up this menu when you want to improve print quality by adjusting the set print mode.

Setting values The Effect function is not used. Effect : None The printing joint will be the wave form. Effect: Wave Print quality may be improved than "None". The printing joint will shade off. Effect: Fog Set up this menu when obvious white lines or uneven print density appear on printed media in "Wave". The printing joint will shade off as the wave Effect: Fine & Fuzz Performs the printing at slower speed than "Wave". The printing joint will shade off. Effect: Fine & Fog Set this when there is horizontal unevenness in "Fine & Fuzz". Prints at a slower speed than "Fine & Fuzz". This is the initially set value. Performs the printing at slower speed than Effect: Fine & Wave "Wave". Set this menu to improve print quality compared with "Wave". Performs "Wave" printing using the half of the Effect: A - S. Fine & Wave print head nozzles. Since only half of the print head nozzles are used, printing speed becomes about half of "Wave". Set this menu to improve print quality compared with "Fine & Wave". This is not displayed if you are using the 5-color set, 7-color set or 8-color set. Performs Wave printing using the half of the Effect: B - S. Fine & Wave print head nozzles on the opposite side of "A-S.Fine & Wave". Since only half of the print head nozzles are used, printing speed becomes about a half of

"Wave".

Set this menu to improve print quality compared with "Fine & Wave".

This is not displayed if you are using the 5-color set, 7-color set or 8-color set.



Sets up when adjusting the printer for the optimum quality of image print. Before adjusting this setting, enter the thickness of the media.

#### Submenus

Adj. Print 1: Standard

Adjusts only the print mode in the user type setting which is currently set.

Adj. Print 2: Custom

Adjusts the print modes other than the mode in the user type setting which is currently set.

### Adj. Print 1: Standard

Adj. Print 1: Standard

Adjusts only the print mode in the user type setting which is currently set.

"1. Confirm pattern" P. 68

**☞ "2. Rough adjustment pattern" P. 69** 

**③ "3. Fine adjustment pattern" P. 69**

#### Submenus

Adj. 1: Confirm Ptn.

Print the test pattern for the adjustment. Check before adjusting.

Adj. 2: Rough Pattern

Perform this to adjust large misalignment. Print Adjust pattern and enter the set value.

Adj. 3: Fine Pattern

Perform this to adjust small misalignment. Print Adjust pattern and enter the set value.

### Adj. Print 2: Custom

Adj. Print 2:	Custom
Auj. Fillit 2.	Custoni

Perform adjustment for all patterns (A to I).

T1. Confirm pattern" P. 68

Tough adjustment pattern" P. 69

**७ "3. Fine adjustment pattern" P. 69** 

Submenus		
Adj. 1:	Confirm Ptn.	The test patterns of A to F will be printed for Adjust print. Check before adjusting.
Adj. 2:	Rough Ptn. ALL	For printing all rough adjustment patterns from A to I.
Adj. 3:	Rough Pattern A	For printing an adjust pattern selected from A to I.
Adj. 11:	Rough Pattern I	1
Auj. 11:	Kougn Pattern i	J
Adj. 12:	Fine Ptn. ALL	For printing all fine adjustment patterns from A to I.
Adj. 13:	Fine Pattern A	For printing an adjust pattern selected from A to I.
<u>:</u>		1
Adj. 21:	Fine Pattern I	]

## Adjustment patterns for each print mode

Print mode	Print mode specifications	Adjustment pattern	
Quality 1	1440 x 1440, 16 pass, Uni	_	
Quality 2	1440 x 1440, 16 pass, Bi	B 40, 16 pass, Bi	
Graphics 1	720 x 1440, 8 pass, Uni		
Graphics 2	720 x 1440, 8 pass, Bi		
Banner 1	720 x 1080, 6 pass, Bi	H 20 x 1080, 6 pass, Bi	
Banner 2	720 x 720, 4 pass, Bi		

#### **Steps**

- 1. Print a confirm pattern and check it for printing errors.
- 2. Print "Rough adjustment pattern" and look for a place that is properly adjusted in the printing result.
  - •If you selected "Adj. Print 2: Custom", select "ALL" or "A" to "I".
  - •The number printed under the pattern without alignment errors is the adjustment value.
- **3.** Enter the adjustment values.
- 4. Print "Fine adjustment pattern" and look for a place that is properly adjusted in the printing result.
  - •If you selected "Adj. Print 2: Custom", select "ALL" or "A" to "I".
  - •The number printed under the pattern without alignment errors is the adjustment value.
- **5.** Enter the adjustment values.



- Warm up the heater before printing the Confirm and Adjustment patterns. "Warming Up" and "Skip -> Enter" is displayed on Operation panel.
- · You can start printing while the printer is warming up.

**Starting printing during warming up" P. 51** 



#### CAUTION

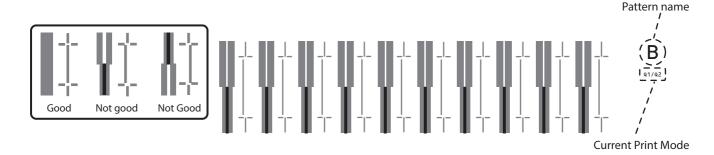


While "Warming Up" is displayed, do not touch Media guide.

You could burn yourself.

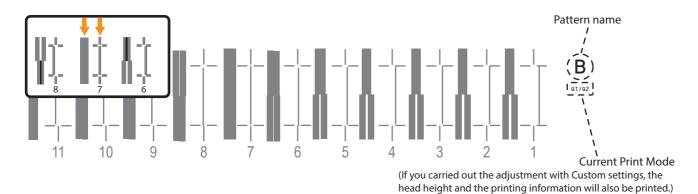
#### 1. Confirm pattern

- · Press the [Enter] key to carry out printing.
- Check the printing results. If there are shifting problems, proceed to rough adjustment pattern printing.
- In the picture below, there are misalignments.



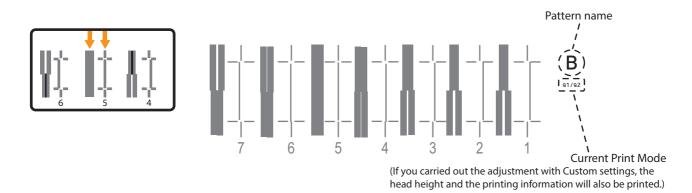
#### 2. Rough adjustment pattern

- · Press the [Enter] key to carry out printing.
- Check the print results and select the number that looks most aligned between 1 and 11.
- Pattern names such as "Pattern B: 6" are shown on the display. Use the [+]/[-] key to enter the number of the best-adjusted pattern, and press the [Enter] key.
- In the case of the picture below, enter "7", so that the display reads "Pattern B: 7".



### 3. Fine adjustment pattern

- Press the [Enter] key to carry out printing. For the Fine adjustment pattern, the same patterns will be printed repeatedly on both sides and center of the media.
- Check the print results on both sides and center of the media and select the number that looks most aligned between 1 and 7.
- Pattern names such as "Pattern B: 4" are shown on the display. Use the [+]/[-] key to enter the number of the best-adjusted pattern, and press the [Enter] key.
- In the case of the picture below, enter "5", so that the display reads "Pattern B: 5".





Sets up various settings on the Media feed correction.

When the following defects are found in printing results, they may improve by conducting a media feed correction.

- · Images are overlapping.
- There are white lines in images.

Submenus		
PF1:	Initial Print	PF1: Initial Print" P. 71
PF2:	Initial Change	PF2: Initial Change" P. 71
PF3:	Confirm Print	PF3: Confirm Print" P. 72
PF4:	Micro Print	₩ "PF4: Micro Print" P. 72
PF5:	Micro Change	"PF5: Micro Change" P. 73

#### **Steps**

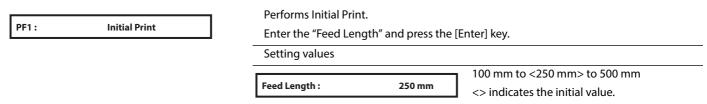
- **1.** Select "PF1: Initial Print".
  - "Feed Length: 250 mm" is displayed on Operation panel.
- **2.** After the initial adjustment printing, cut the media.
  - •Measure the distance between the "\(\frac{\psi}{2}\)" in the initial adjustment print using a ruler.
- **3.** Refer to Chapter 1 "Media feed adjustment steps" P. 49 and select "PF2: Initial Change" on the operation panel.
- **4.** Press the [+] key or [-] key on Operation panel and enter the measured value in Step 2.
  - •Press the [Enter] key to save the initial adjustment value.
- **5.** Press the [+] key or [-] key on Operation panel to select "PF3: Confirm Print".
  - "Feed Length: 250 mm" is displayed on Operation panel.
- **6.** After the confirmation adjustment printing, cut the media.
  - •Measure the distance between the " $\Psi$ " in the confirmation adjustment print using a ruler. Then, confirm that the distance matches the feeding length when printing.
  - •If the distance does not match the feeding length, follow the procedure from Step 1 to Step 5 and readjust.
  - •If the distance matches the feeding length, proceed to Step 7.

- 7. Refer to Chapter 1 "Media feed adjustment steps" P. 49 and select "PF4: Micro Print" on the operation panel.
  - Check the pattern and micro adjustment value.
  - •In the pattern, look for a place that has least white lines or overlapping in images. The number printed below the adequate pattern is the micro adjustment value.
- **8.** Enter the micro adjustment value according to the printing result in Step 7.

### When you know the adjustment value (when changing the media or for similar operations)

- **1.** Enter the adjustment value for "PF5: Micro Change".
- **2.** Select whether you wish to print a confirm pattern and complete the setup.

#### **PF1: Initial Print**



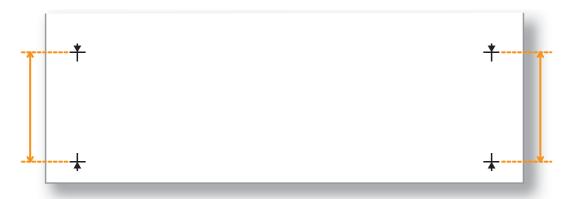
- After the initial adjustment printing, cut the media.
- With a ruler, measure the length between "\(\frac{1}{2}\)" in the pattern. In the example below, the measured place is shown in orange dotted lines and arrows (the orange parts are not actually printed).



The length of media that is fed (feeding length) for initial adjustment printing is normally set at 250 mm.

If you increase the feeding length, the accuracy of the Media feed adjustment improves.

To change the feeding length, press the [+] key or [ - ] key on Operation panel and change the set value.



#### **PF2: Initial Change**

Use the [+] / [ - ] key to enter the adjustment value, and press the [Enter] key. PF2: **Initial Change** Setting values You can set a value that is between +50 mm Init.: 250.0 mm / 250 mm and -50 mm of the feed length configured in "Initial Print".

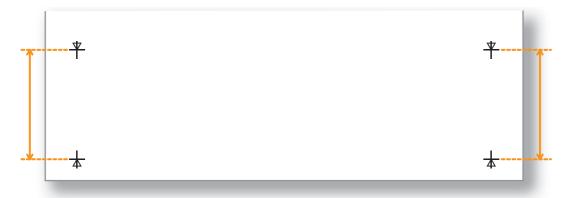
#### **PF3: Confirm Print**

- After the confirmation adjustment printing, cut the media.
- With a ruler, measure the length between "\preceq" in the pattern. In the example below, the measured place is shown in orange dotted lines and arrows (the orange parts are not actually printed).
- If the measured length does not match the feeding length, re-correct with PF1: Initial Print.
- If the measured length matches the feeding length, proceed to PF4: Micro Print.



The length of media that is fed (feeding length) for confirmation adjustment printing, is normally set at 250 mm.

If you increase the feeding length, the accuracy of the Media feed adjustment improves. To change the feeding length, press the [+] key or [-] key on Operation panel and change the set value.



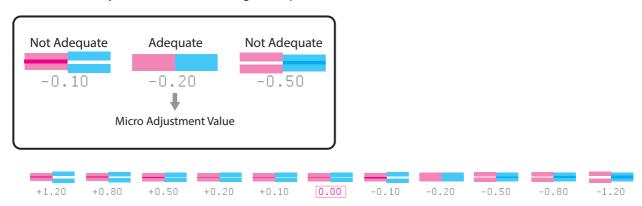
### **PF4: Micro Print**

PF4: Micro Print

Performs Micro adjustment Print.

Enter the appropriate micro adjustment value according to the print result.

• Observe the pattern and verify the micro adjustment value. In the pattern, look for a place that has least white lines or overlapping in images. The number printed below the pattern is the micro adjustment value. Enter the micro adjustment value according to the print result.



**⊘** Note

Once an appropriate micro adjustment value has been saved, the value will be the baseline value from the next time to be printed in the center of the pattern. For example, if you have entered "-0.20" and print a micro adjustment pattern, values printed below block pattern will be changed to (from left) +1.00, +0.60, +0.30, -0.20 (baseline value), -0.30, -0.40, -0.70, -1.00, -1.40.

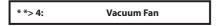
#### **PF5: Micro Change**



Use the [+] / [-] key to enter the adjustment value, and press the [Enter] key. Select whether you wish to perform confirmation print and complete the setup.

Setting values -5.00% to <0.00%> to 5.00% Micro: 0.00% <> indicates the initial value.

#### \*\*>4: Vacuum Fan



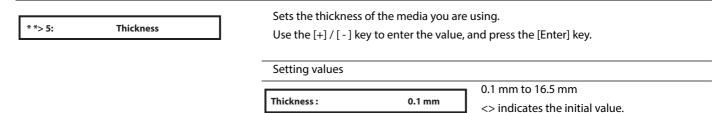
Sets up vacuum fan operation.

Use the [+] / [ - ] key to select the value, and press the [Enter] key.

• If you are using a thin or delicate media and there is risk of it wrinkling due to the fan, set a lower value for the fan.



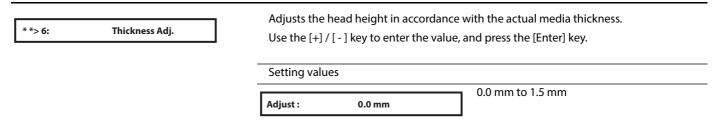
#### \*\*>5: Thickness





- This menu is to automatically adjust print quality to a certain extent. If you want to improve print quality, manually adjust it.
  - "\*\*>2: Adjust Print>" P. 66
- If you have adjusted the print settings, you do not need to configure the thickness of the media in this menu.

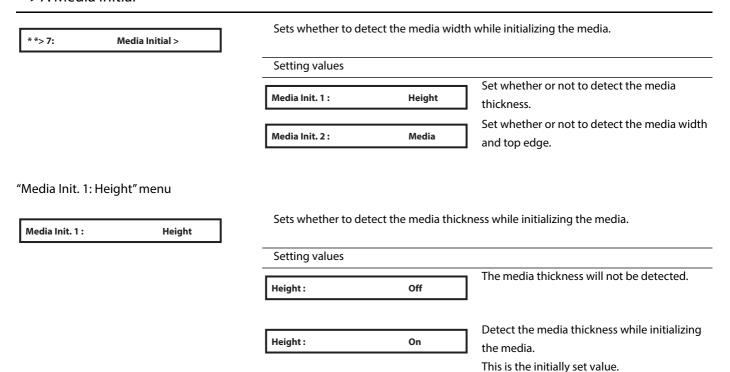
#### \*\*>6: Thickness Adj.





If the adjustment value is entered to raise the head height, print quality is not guaranteed.

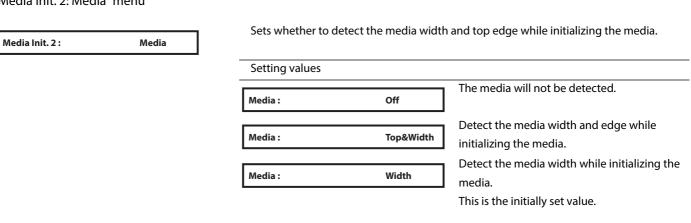
#### \*\*>7: Media Initial



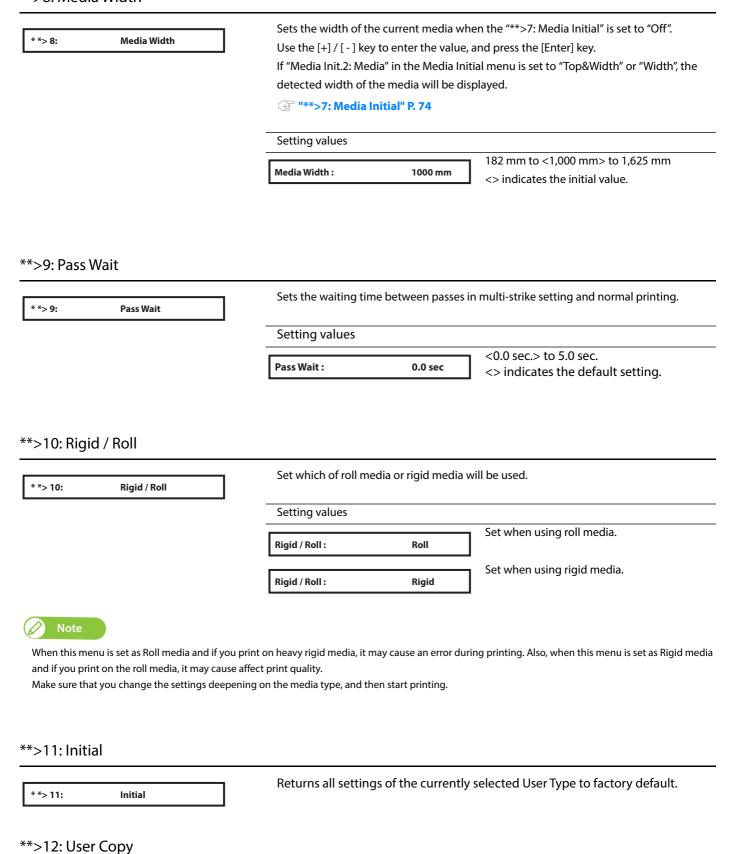


Media thickness detection is for stabilizing print quality by keeping the clearance between Print head and media. Detected value may be differ from the actual media size.

#### "Media Init. 2: Media" menu



#### \*\*>8: Media Width



\* \*> **12:** User Copy This is for copying the currently selected User Type setting into another User

The items that will be copied are:

- . Settings for "Print Mode", "Effect"
- . Adjustment values for "PF Adjust"
- . Settings for "Vacuum Fan", "Thickness", "Thickness Correction", "Media Initial",
- "Media Width", "Drying Time between Passes" and "Media Type".

## Menu 3: Setup

## Set 1: Spitting

Set 1: Spitting

Sets up the spitting operation while printing.

The display will shift to setting of the pass count only if "On" is set for "Spitting".

Setting values

Perform the spitting operation on Spitting box located on the origin side for every shuttle. This is the initially set value.

Spitting:

On Perform the spitting operation on the page margins. The printing speed will be improved since the number of time to return to Spitting box is reduced.

Spitting:

Off

Spitting:

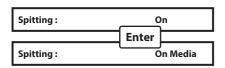
Off



- · Spitting is a maintenance operation for preventing clogging of the print head's nozzles. It consumes ink.
- When Spitting is set to "Off", nozzles will become easily clogged because spitting is not performed. In such a case, print quality cannot be guaranteed.
- When the spitting setting is "On Media", the maximum printable media width becomes 16 mm shorter. Therefore, the side margins become the value that you have set in Side Margin menu +8 mm.

**™** "Set 2: Side Margin" P. 78

#### Pass Count menu



This is for setting the interval at which the print head will carry out spitting operation.

• The head will carry out spitting operation every time it completes the number of passes that you set here.

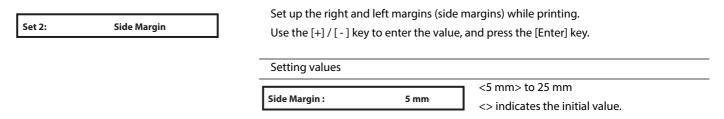


If the number of spitting returns is set high, there is a higher chance of nozzle clogging when printing for a long time. In such a case, print quality cannot be guaranteed.

### < Example of spitting operation>

Spitting setting	Pass Count setting	Operation
On	1 cnt	Perform the spitting operation on Spitting box every time Print head
		returns to the origin position.
		Spitting operation is not performed over the media.
On	5 cnt	Performs the spitting operation on Spitting box on the origin side
		every five times Print head returns to the origin position.
		Spitting operation is not performed over the media.
On Media	1 cnt	Performs the spitting operation on Spitting box on the origin side
		every time Print head returns to the origin position.
		Perform the spitting operation on Spitting box every time Print head
		returns to the origin position.
On Media	5 cnt	Performs the spitting operation on Spitting box on the origin side
		every five times Print head returns to the origin position.
		Perform the spitting operation on Spitting box every time Print head
		returns to the origin position.
Off	_	Spitting is not performed on Spitting box or the media.

## Set 2: Side Margin





When the "Spitting menu" is set to "On Media", the maximum printable media width becomes 16 mm shorter. Therefore, the side margins become the value that you have set in Side Margin menu +8 mm.

**☞** "Set 1: Spitting" P. 77

## Set 3: Take up



Sets the media cutting operation after printing.

Setting values

Off Take up:

The Take-up Unit will not be used.

This is the initially set value.

Take up: On Set when using the Take-up Unit.

#### When the "Take up" is set to "On"



When the "Take up" is set to "On", the menu is shifted to "Page Gap". In the "Page Gap menu", you can change the margin setting between images.

Setting values

Page Gap: Normal The default margin setting between images will be applied.

This is the initially set value.

Page Gap: Narrow The margin setting between images is smaller than Normal.

### Set 4: Media Location

Set 4:

**Media Location** 

Set the media loading position manually if you are using the media that cannot be detected, such as transparent media.

- Use the [>] / [<] key to move the cursor.
- Use the [+] / [ ] key to increase or decrease the value.

Setting values

Side Edge : +000<u>0</u> Set the right edge position of the media. The higher the entered value, the further toward the opposite of the origin side Print head moves.

• [Enter] key: "Wait for a while" is displayed on Operation panel, and the LED pointer moves to the position of the entered value.

+000<u>0</u> Top Edge:

Set the top edge position of the media. The higher the entered value, the more media

Media Width: +0000 Set the media width.

Enter the number for the media width.

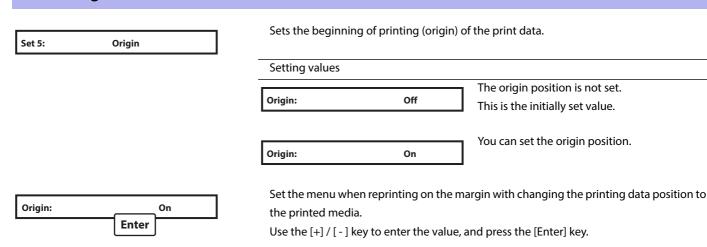


• This menu is only available when the "Media Init. 2: Media" is set to "Off" or "Width".

"\*\*>7: Media Initial" P. 74

• This menu is only available for the media that is loaded. If the media loading position is changed after replacing the media, set this menu again.

## Set 5: Origin



Setting values

015.0 mm

х:

Υ:

0005.0 mm

X (media feeding distance):

15.0 mm to 999.9 mm

Y (print head transferring distance) 5.0 mm to 1,405.0 mm

- [Enter] key:
   "Moving Origin Pos." is displayed on
   Operation panel and Print head moves to
   the starting position with the LED pointer
   on
- After Print head has moved to the origin position, and if you want to change the position, adjust the position using Operation panel again.



Depending on the set value of the side margin, the maximum set value of Y (print head transferring distance) decreases.

**☞ "Set 2: Side Margin" P. 78** 

The right side margin will be the following sum depending on the setting.

Y of Origin menu + 8 mm (when the spitting is set to On Media) + Value set in Side Margin menu.

**☞ "Set 1: Spitting" P. 77** 

**Set 2: Side Margin** ■ P. 78

## Set 6: Standby Heating

Set 6: StandbyHeating

Sets up the length of time to preheat the heater while the printer is in standby mode. If printing again during the set time of standby heat, warm-up time can be shortened.

Setting values

10 min to <60 min> / 2 hours to 8 hours

Standby:
60 min 
4 hours to 8 hours
4 indicates the initial value.

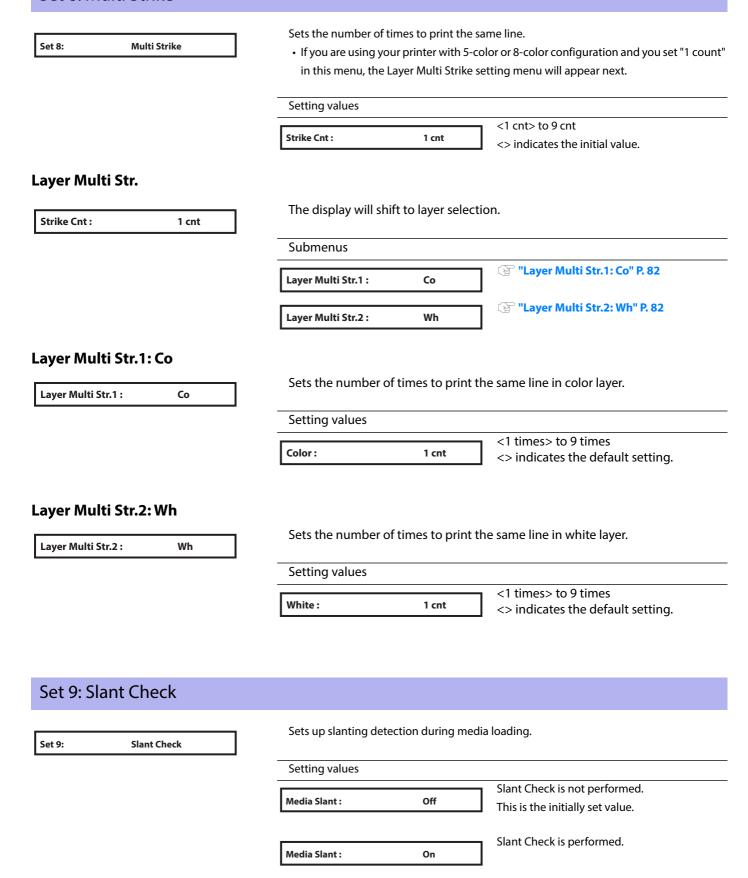


The Standby heating function is only available when Blower heater is in the "Printer Link" status.

## Set 7: Head Travel

3et /: ne	eau Iravei			
Set 7:	Head Travel	Sets up the range	that Print head move	es while printing.
		Setting values		
		Distance:	Data	Print head moves the range of the print data width.
		Distance :	Machine	Print head moves from origin to the maximum printable media width.
		Distance:	Media	Print head shifts within the media width.  This is the initially set value.

#### Set 8: Multi Strike



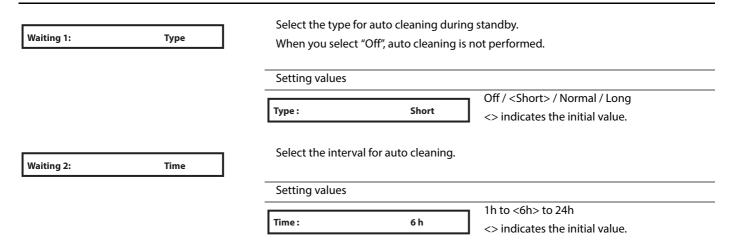
## Set 10: Auto Cleaning

Sets up the range that Print head moves while printing. Set 10: **Auto Cleaning** Submenus Set the value for auto cleaning in standby Auto 1: Waiting > mode. **Waiting Auto Cleaning" P. 83** Set the value for auto cleaning during printing. Auto 2: Printing > **Printing Auto Cleaning" P. 84** Set the value for auto cleaning before printing. Auto 3: **Before Print Before Print Auto Cleaning" P. 84** Set the value for auto cleaning after printing. Auto 4: **After Print** Tafter Print Auto Cleaning" P. 84 Make the settings for auto cleaning when the Auto 5: Power On power is turned ON as well as after recovery from sleep mode. "Power On Auto Cleaning" P. 84 Make the settings for auto cleaning when the Auto 6: **Power Off** power is turned OFF.



Even when "Before Print" and "After Print" are set, auto cleaning is not performed for test printing.

#### Waiting Auto Cleaning



Important!

If you set the time for Idle auto cleaning longer than the default setting, nozzles may get clogged.

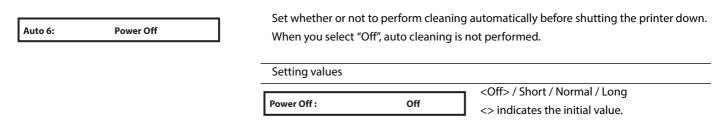
**"Power Off Auto Cleaning" P. 85** 

## **Printing Auto Cleaning**

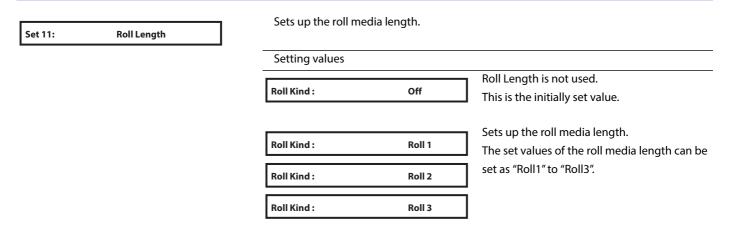
Printing 1:	Туре	Select the type for auto cleaning while printing.  When you select "Off", auto cleaning is not performed.
		Setting values
		<pre>Type: Off</pre>
Printing 2:	Time	Select the interval for auto cleaning.
		Setting values
		Time:  1h to <6h> to 24h  <> indicates the initial value.
efore Print	t Auto Cleaning	
Auto 3:	Before Print	Select the type for before printing auto cleaning.  When you select "Off", auto cleaning is not performed.
		Setting values
		Sefore Print: Off < Off> / Short / Normal / Long
fter Print /	Auto Cleaning  After Print	Select the type for after printing auto cleaning.  When you select "Off", auto cleaning is not performed.
		Setting values
		<pre>After Print: Off</pre>
ower On A	Auto Cleaning	
Auto 5:	Power On	Set whether or not to perform cleaning automatically when the power is turned ON a well as after recovery from sleep mode.  When you select "Off", auto cleaning is not performed.
		Setting values
		Off / Short / Normal / Long / <auto> <pre></pre></auto>

When using 5-color or 8-color configuration, the setting is fixed to "Auto".

#### **Power Off Auto Cleaning**

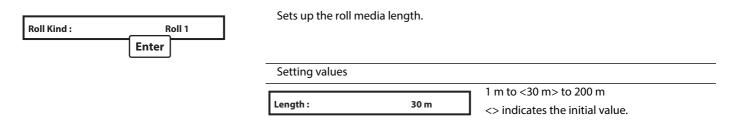


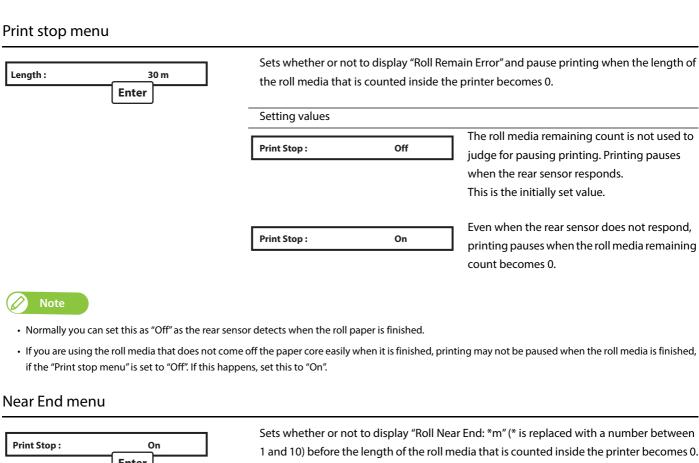
## Set 11: Roll Length

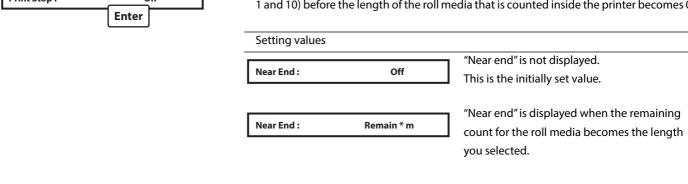


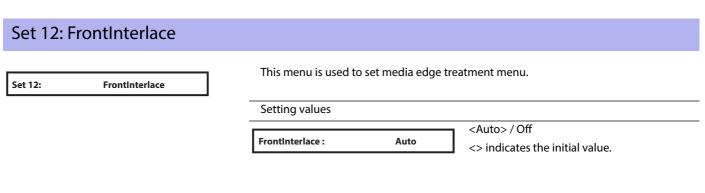
#### When the "Roll Kind" is set to "Roll 1", "Roll 2" or "Roll 3"

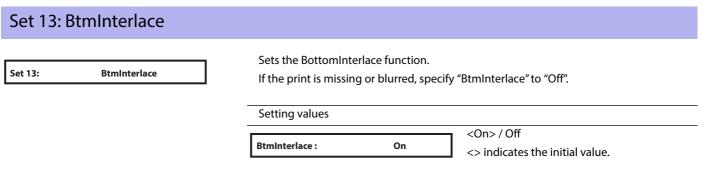
#### Length menu











#### Set 14: Ink Status

Set 14: **Ink Status**  The amount of ink remaining in each lnk cartridge (ink bag) is displayed. (unit: %)

1234:	XX / XX / XX / XX	
5678:	XX / XX / XX / XX	

- 4-color setting
- 1: Black (K)
- 2: Black (K)
- 3: Yellow (Y)
- 4: Yellow (Y)
- 5: Cyan (C)
- 6: Cyan (C)
- 7: Magenta (M)
- 8: Magenta (M)

7-color (Light color) setting

- 1: Black (K)
- 2: Cyan (C)
- 3: Yellow (Y)
- 4: Light Black (LK)
- 5: Light Cyan (LC)
- 6: Light Magenta (LM)
- 7: Cleaner (CI)
- 8: Magenta (M)

7-color (OGB) setting

- 1: Black (K)
- 2: Cyan (C)
- 3: Yellow (Y)
- 4: Orange (OR)
- 5: Blue (BL)
- 6: Green (GR)
- 7: Cleaner (CI)
- 8: Magenta (M)

#### 5-color setting

- 1: Black (K)
- 2: Cyan (C)
- 3: Cleaner (CI)
- 4: Cleaner (CI)
- 5: Yellow (Y)
- 6: Magenta (M)
- 7: White (Wh)
- 8: White (Wh)

#### 8-color (Light color) setting

- 1: Black (K)
- 2: Cyan (C)
- 3: Yellow (Y)
- 4: Light Black (LK)
- 5: Light Cyan (LC)
- 6: Light Magenta (LM)
- 7: White (Wh)
- 8: Magenta (M)

#### 8-color (OGB) setting

- 1: Black (K)
- 2: Cyan (C)
- 3: Yellow (Y)
- 4: Orange (OR)
- 5: Blue (BL)
- 6: Green (GR)
- 7: White (Wh)
- 8: Magenta (M)



- To display various information of lnk, use genuine ink and S/C cards. If Ink other than genuine Ink are used, ink status will not be displayed correctly.
- If it is blinking at 10%, smartchip recovery is being performed on the corresponding ink cartridge.

**™** "Smartchip recovery" P. 153

## Set 15: Life Times

Set 15: Life Times

Displays the operational life time of each part.

- The lifetime of each part is indicated by the asterisks (Maximum 5 asterisks: 100% left). As the part deteriorates, the number of asterisks decreases one by one (20%).
- The part should be changed when all of the asterisks have disappeared and "Change" is displayed. Contact your local MUTOH dealer to ask for replacing parts.
- After "Change" appears, "Life Times [Pump]" or a similar message will be displayed when you are not in this menu.

You can delete this message by pressing the [Cancel] key.

Submenus			
Head:	E***	F	Displays the service life for the print head. The service life in this case is at 60%.
Pump:	E***	F	Displays the service life for the pump.
CR Motor :	Chang	e	Displays the service life for the CR motor.  The service life of the component in this case is over.  Have the component replaced.
PF Motor :	E****	F	Displays the service life for the PF motor.
C Pump :	E***	F	Displays the service life for the Circulation pump.

## Set 16: Header Dump

Set 16: **Header Dump**  Sets whether to print the following information when printing.

- · Data header
- Data dot number (printed only when Header damp setting is "On")
- Printing date and time
- · Printer serial number
- · Firmware version
- Receiving time (printed only when Header damp setting is "Dump")
- Receiving size (printed only when Header damp setting is "Dump")

Setting values	
Header Dump : Off	Dump data is not printed. This is the initially set value.
Header Dump : On	Dump data is printed after the original image i printed.
Header Dump : Dump	Prints only damp data. "Data dot number" is not printed.
Header Dump : Print	Prints the last header dump.  If no history is available, "No Print Data" will appear on the operation panel.



- The data will be useful when contacting technical support.
- · Performing printing if the printer is connected to PC, the print settings of RIP soft you are using are printed on data header.

#### Set 17: Start Feed

Set 17: **Start Feed**  You can change the margin setting between images.

- Value over 0: The margin setting between images will be wider than when setting "0".
- Value equal to 0: The default margin setting between images will be applied.
- Value below 0: The margin setting between images will be smaller than when setting

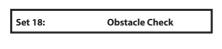
Setting values -10 mm to <150 mm> to 500.0 mm Start Feed: 150 mm <> indicates the initial value.



With take-up system: if you want to set "Start Feed" to below 0, set "Page Gap" to "Narrow". f not, the Start Feed setting is not reflected properly.

"When the "Take up" is set to "On"" P. 79

### Set 18: Obstacle Check



Enable or disable the head strike prevention sensor to detect obstacles.

**☞** "Head strike prevention sensor" P. 25

Setting values

Disable the sensor.

Obstacle Check:

On

Enable the sensor to detect obstacles.
This is the initially set value.

### Set 19: Initialization

Set 19:	Initialization

Returns the settings of the printer to default.

Init: ALL

Submenus

For initializing the settings of all the menus.

Init: UserType

Initializes the settings in the User Type menu.

## Set 20: Temporary

Set 20: Temporary

Displays the menus which have been set to hide in the "Menu4: Menu Option" temporarily.

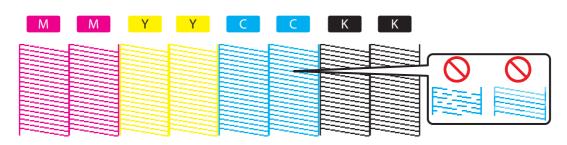
Press the [Enter] key to return to the previous menu with all set up items displayed.

## Menu 4: Test Print

#### Test 1: Nozzle Check

Test 1: **Nozzle Check**  Use this menu to check that the print head and print nozzles you selected can properly print without nozzle clogging and missing or too light lines.

**™ "Nozzle check" P. 44** 





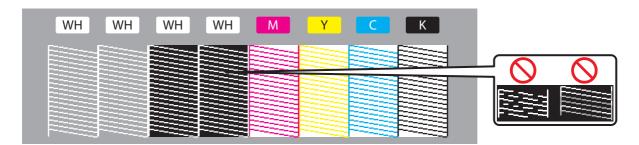
- The above pattern is the example when the printer is set to 4-color setting.
- The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

#### Test 2: Nozzle Check B

Test 2: Nozzle Check B The background for some of the nozzle check pattern is printed in color so that the nozzle condition is easy to see.

- Part of the background for the white nozzles is black.
- The background of the color nozzles are white.

"Nozzle check" P. 44





- "Nozzle Check B" will only appear in the menu on the printer with 5-color or 8-color ink configuration.
- The printer information (date and time of printing, printer's serial number, firmware version) is printed on the nozzle check pattern.

## Test 3: Mode Print

Test 3: Mode Print

Mode print can be performed. Used to confirm the following printing conditions.

- Print quality
- Effect
- Micro adjustment value for feed correction

2021/1/01 0:00 G2(720x1440 8Pass Bi) -Fine&Fog / PF Adjust : 0.00%

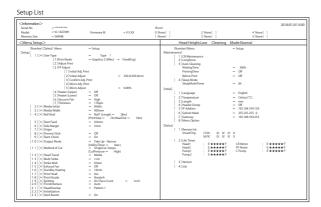
## Test 4: Setup List

Test 4: Setup List

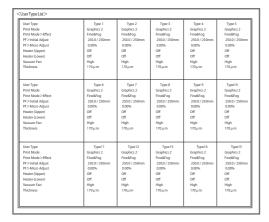
Setup list printing is performed.

Use this to check the current setting contents and the User Type.

#### **Setup List**

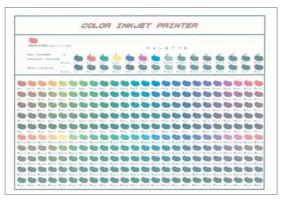


## **User Type List**



## Test 5: Palette

Test 5: Palette Palette print is executed for the color demonstration.





When the selected print mode of the user type is Banner 1, Palette menu is not displayed.

"\*\*>1: Print Mode" P. 64

## Menu 5: Cleaning

#### Perform Head cleaning.

Time:	Short	Consumes less ink than Normal cleaning.
Time:	Normal	Conduct nozzle check before and after printing, and use when nozzle missing is found.
Time:	Long	Consumes more ink than Normal cleaning. When nozzle missing still occurs after Normal cleaning, conduct Long cleaning.
Time:	LittleCharge	Though much better cleaning results can be expected than Long cleaning, it consumes a large amount of ink.
Time:	Initial Charge	Gives a rather higher cleaning effect than "LittleCharge", but also consumes rather more ink.

## Menu 6: Menu Option

You can choose whether to display the menus in "Menu 3: Setup".

Choose whether you wish to display a menu by pressing the [Enter] key.

[\*]= the item will be displayed

[ ]= the item will not be displayed

1:[*]	Spitting	Displays the "Spitting menu".  The initial value is [*].
2: [*]	Side Margin	Displays the "Side Margin menu".  The initial value is [*].
3:[*]	Take up	Displays the "Take up menu".  The initial value is [*].
	· ·	· ·
19: [*]	Initialization	Displays the "Initialization menu".  The initial value is [ ].
20:	ALL On	If you press the [Enter] key, all the items in Menu Option will be marked with a [*] (displayed).
21:	ALL Off	If you press the [Enter] key, all the items in Menu Option will be marked with a [] (not displayed).

## Menu 7: Maintenance

## Maintenance 1: Daily Maintenance



Use this menu in following cases:

- If the nozzle missing still persists after performing head cleaning.
- If you perform printing all day without entering to sleep mode and you need to perform daily maintenance.

**Continuously using printer after daily maintenance" P. 126** 

Submenus

Press the [Enter] key to start maintenance.

Daily Maint.:

Start

After the maintenance is complete, press the [Enter] key.

• The printer automatically performs the

The printer automatically performs the cleaning.



To perform daily maintenance after using the printer for the day, see "Daily Maintenance" P. 116.

### Maintenance 2: Long Storage

Mnt. 2: Long Storage

After washing Print head with the cleaning fluid, Print head is filled with the cleaning fluid. In the following situations, perform long storage and then turn the printer OFF.

- When the printer is turned off for over 24 hours.
- When you may not be able to run a weekly cleaning on the printer that is in sleep mode.

See below for the procedure.

**☞** "Long Storage and Initial Charge" P. 139

## Maintenance 3: Cap Out

Mnt. 3: **Cap Out**  Used in the following cases.

- Replacing absorption material for the flushing box
- Replacing the cleaning wiper

**™ "Maintenance" P. 104** 

Submenus

Cap Out:

Start

Press the [Enter] key to perform replacement.

- The carriage moves to the center of the
- The cleaning wiper moves upward.

Cap Out: End After the replacement is complete, press the [Enter] key.

• The printer moves the carriage and the cleaning wiper back to each original position.

## Maintenance 4: Longstore

Mnt. 4: Longstore Flush the print head using cleaning fluid and discharge the fluid from the printer. Use this menu before transporting.

See below for the procedure.

Transporting the printer" P. 138

#### Maintenance 5: Color Maintenance

Mnt. 5: Color Maint.>

If the printer has not been used for a certain period of time from the last use, an automatic color ink maintenance which spits out some ink is performed before printing to ensure its performance.

If color inconsistency on prints is noticeable, choose On in the "Color Maint.2 Setup" to enable the color maintenance.

If there is noticeable color variation between print runs, use the menu "Color Maint.1: Start" to perform a color ink maintenance.

Select this option when color inconsistency still persists even if "Color Maint.2 Setup" is set to On. By pressing the [Enter] key, the printer will run a color ink maintenance immediately.

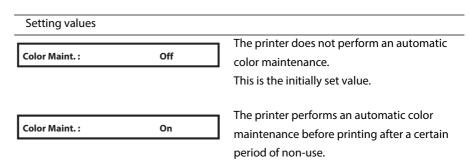
Select to enable or disable an automatic color maintenance.

#### Setting the color maintenance



Selecting On will automatically perform a color ink maintenance before printing after a certain period of non-use.

If color inconsistency on prints is noticeable, choose On to enable the color maintenance.



## | Important!

• When you are not using the printer, always leave the power on and put the printer into the sleep mode while not in use. If you do not put the printer into the sleep mode, the ink inside the printer could settle out and/or coagulate, causing poor image quality or printer failure.





Color maintenance consumes quite a large amount of ink.

Selecting On in the "Color Maint.2 Setup" option will consume more ink than a normal automatic cleaning.

## Maintenance 6: Soak Cleaning

Mnt. 6: Soak Cleaning

Soak the print head in the maintenance cleaning solution filled in the head cap to clean dirt on the surface of nozzle.

**☞ "Soak Cleaning" P. 129** 

## Menu 8: Version

Menu 8: Version > Displays the versions of the firmware.

Ver. M / H: **X.XX / X.XX**  Displays the versions of the firmware on the main (M) and heater (H) sides.

## Menu 9: Initial

### Initial 1: Language

Initial 1: Language

For setting the language that will be displayed.

Setting values

Language: エイゴ English

Displays will be in English.

This is the initially set value.

Language : ニホンゴ Japanese

Displays will be in Japanese.

## Initial 2: Length

Initial 2: Length

For setting the length units that will be displayed.

Setting values

Length: mm

Displays the length in millimeters (mm).

This is the initially set value.

Displays the length in inches (inch).

### **Initial 3: IP Address**

Initial 3:

**IP Address** 

Sets the IP address of the printer.

- Use the [+] key to increase a setting value.
- Use the [ ] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- Confirm your input for each value.

Setting values

IP: 19<u>2</u>. 168. 1. 253

0.0.0.0 to <192.168.1.253> to 255.255.255.255

<> indicates the initial value.



Be sure to set the IP address, the Subnet Mask, and the Gateway after consulting the network administrator.

#### **Initial 4: Subnet Mask**

Initial 4:

**Subnet Mask** 

Sets the subnet mask of the printer.

- Use the [+] key to increase a setting value.
- Use the [-] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- · Confirm your input for each value.

Setting values

MASK: 25<u>5</u>. 255. 255. 0 0.0.0.0 to <255.255.255.0> to 255.255.255.255

<> indicates the initial value.

### **Initial 5: Gateway**

Initial 5:

Gateway

Sets the gateway.

- Use the [+] key to increase a setting value.
- Use the [-] key to decrease a setting value.
- Press the [Enter] key to confirm your input for a value. The cursor will move on to the next setting value.
- · Confirm your input for each value.

Setting values

GW: 168. 254 19<u>2</u>. 1.

0.0.0.0 to <192.168.1.254> to 255.255.255.255

<> indicates the initial value.

#### Initial 6: Alert Buzzer

Initial 6:

Alert Buzzer

Selects how to turn off the printer beep sound when an error occurs.

For unattended printing, you can select "Off" setting to avoid continuous buzzer beep.

Submenus

Alert Buzzer:

Press any key on Operation panel to turn off beep sound.

This is the initially set value.

Alert Buzzer : Off After several beeps, the printer automatically turns off beep sound.

## Menu 10: Job Status

Menu 10: Job Status > Various information of previous print will be displayed.

XXX.X m

Displays if the print is completed. JobStatus: Completed • When the print is completed: [Completed] • When the print is canceled: [Canceled] The total length of print data (media feeding ToDoLength: XXX.X m direction) will be displayed. The printed length will be displayed. Done: XXX.X m

displayed.

The remaining length of print data will be



• The values displayed in this function are just standard values, not guarantee the accuracy.

Remain:

- If the print data includes no length data, all information will be displayed as "0".
- This function is to check the information of print data with the print operation is completed. For the details on data while printing, please refer to the "Menu 3: Job Status" P. 53 under "What you can do on the operation panel during printing" P. 52.

# Chapter 3 Maintenance

Maintenance	104
Agitating ink	105
Agitating ink	105
Checking and replacing ink	108
Checking ink level	109 109
Emptying waste fluid tank	113
Daily Maintenance	
Flow of Daily Maintenance  Preparing for Daily Maintenance  Performing Daily Maintenance  Continuously using printer after daily maintenance	116 117
Cleaning each part	128
Head cleaning	
Replacing consumable parts	131
Replacing absorption material for the flushing box	
Moving or transporting the printer	137
Moving the printer  Transporting the printer	
Long Storage and Initial Charge	139
If not using the printer for a long period of time  Performing Long Storage  Performing initial charging after head cleaning	140

## Maintenance

To maintain the performance of this product, please conduct maintenance by yourself. The types of maintenance are shown next.

Before and after daily operation	"Agitating ink" P. 105
	"Nozzle check and cleaning" P. 44
After daily operations	"Daily Maintenance" P. 116
Based on your usage condition	"Head cleaning" P. 128
	"Replacing ink" P. 109
	"Replacing Adapter's plug for High capacity ink pack adapter" P. 112
	"Emptying waste fluid tank" P. 113
	"Replacing absorption material for the flushing box" P. 131
Monthly	"Inside cleaning" P. 130
Every six months	"Replacing the cleaning wiper" P. 135
When not used for a week or more	"Head cleaning" P. 128 (Once a week)



Since a service technician has to handle following cases, please contact your local MUTOH dealer.

- Error requiring restart is happening repeatedly.
- The message to notify the life of motor, pump is displayed.

**™ "Messages and Error Messages" P. 148** 

## Agitating ink

## Agitating ink

Agitate the ink at the following times to prevent it from settling out and/or coagulating:

- · Before installing new ink
- · When any of the messages below appears

#### 5-color or 8-color configuration:

Agitate the White (Wh) ink. Shake White Cart. Agitate all the color inks except the White (Wh) ink. **Shake Color Cart.** Agitate all ink. **Shake All Cart.** 4-color or 7-color configuration: Agitate all ink. **Shake All Cart.** 



- Agitate the ink periodically. Otherwise, the ink settles or coagulates and may cause poor print quality or a malfunction.
- · You must agitate the ink when the message appears. The printer will not operate until you agitate the ink.





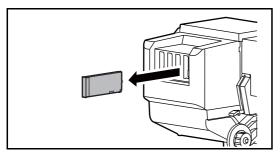
Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.



Be cautious that ink does not get into your eye or make a contact with your skin.

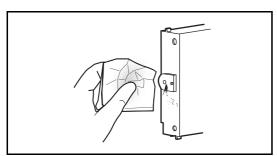
When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

[1]



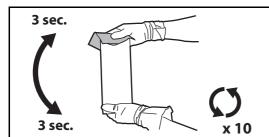
Remove ink cartridges from Ink cartridge slots.

[2]



Using the paper towel provided with the printer to wipe off the ink attached to the printer plug of lnk cartridge.

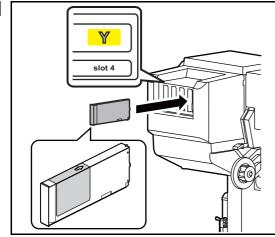
[3]



Agitate ink cartridges as described below.

- Place the lint-free cloth over the ink plug of the cartridge, turn the plug up and maintain vertical position for three seconds.
- Rotate cartridge upside down (plug facing down) and hold for three seconds.
- Repeat it 10 times.

[4]



Re-insert the ink cartridges into Ink cartridge slots.

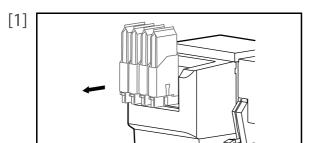
- Make sure to match the ink cartridge color with the label of this printer.
- The arrow should face up.
- Insert all the way to the end.

#### | Important!

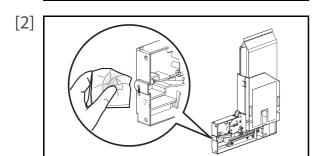
Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.



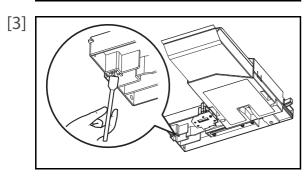
For proper instructions of High capacity ink pack adapter, see the High Capacity Ink Pack Adapter Operation Manual.



Remove High capacity ink pack adapters from the ink cartridge slots.

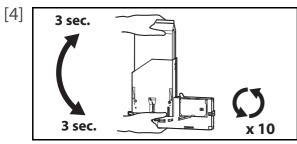


Using the paper towel provided with the printer to wipe off the ink attached to the insertion point for High capacity ink pack adapters.



Tilt High capacity ink pack adapters, use cleaning stick provided with the printer, and absorb the ink collected around the tube connectors.

- Tilt High capacity ink pack adapter so that the caution label is facing down.
- Tilt High capacity ink pack adapter so that the insertion point is lowered a little.



[5]

- To prevent the ink bag and the High capacity ink pack adapter from separating, hold one hand against the top of the ink bag. Rotate the plug of the ink bag vertically and hold for 3 seconds.
- Then, invert the ink bag with the adapter and hold for 3 seconds.
- Repeat that 10 times.

slot 4

Re-insert the High capacity ink pack adapters into Ink cartridge slots.

- Make sure to match the ink pack color with the label of this printer.
- Insert all the way to the end.

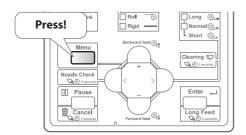
### Important!

Make sure you insert the High capacity ink pack adapters into the original slots. Even when you have the same color ink packs, do not switch and insert them into different slots.

## Checking and replacing ink

## Checking ink level

[1]



Press the [Menu] key on the operation panel.

[2]

Menu 3: Setup >

Press the [-] key several times, to bring up the display on the left. Press the [>] key.

[3]

Set 14: Ink Status

Press the [Enter] key.

[4]

1234: 100/90/80/70

100/90/80/70

Press the [-] key to change the display.

• The ink level is displayed from 0% to 100%.

4-color setting

5678:

1 K1 (Black) 5 C1 (Cyan) 2 K2 (Black)6 C2 (Cyan)

3 Y1 (Yellow) 7 M1 (Magenta) 4 Y2 (Yellow)8 M2 (Magenta)

· 5-color setting

1 K (Black) 5 Y (Yellow) 2 C (Cyan)6 M (Magenta)

3 Cl1 (Cleaner)

Wh1 (White)

4 CI2 (Cleaner) 8 Wh2 (White)

• 7-color (Light color) setting

1 K (Black)
5 LC (Light Cyan)

2 C (Cyan)6 Cl (Cleaner)

3 Y (Yellow)7 M (Magenta)

4 LK (Light Black)

8 LM (Light Magenta)

• 7-color (OGB) setting

1 K (Black)
5 BL (Blue)

2 C (Cyan)6 Cl (Cleaner)

3 Y (Yellow)7 M (Magenta)

4 GR (Green)8 OR (Orange)

• 8-color (Light color) setting

1 K (Black)
5 LC (Light Cyan)

2 C (Cyan)6 LK (Light Black)

3 Y (Yellow)7 Wh (White)

4 M (Magenta)

LM (Light Magenta)

• 8-color (OGB) setting

1 K (Black) 5 BL (Blue) 2 C (Cyan)6 GR (Green)

3 Y (Yellow) 7 Wh (White) 4 M (Magenta)8 OR (Orange)

Note

If it is blinking at 10%, smartchip recovery is being performed on the corresponding ink cartridge.

**☞ "Smartchip recovery" P. 153** 

## When it becomes time to replace ink

When the ink level becomes low, the error LED of the operation panel flashes and a buzzer sounds.

#### Steps



Press the [Enter] key.

- The buzzer stops.
- In the figure to the left, the slot 2 ink cartridge (ink bag) is nearing replacement.
- [2] Prepare the replacement ink.



Sleep mode continues after stopping the buzzer.

### Replacing ink

When a cartridge or pack is out of ink, the error LED on the operation panel flashes with beep sounds.

The printer pauses printing. After replacing with the new ink, it resume printing.



- Do not replace ink when the power of this product is OFF. Ink level cannot be detected correctly.
- If ink is moved from cold to warm place, leave it at least three hours.

## WARNING



Leave ink cartridges (ink bags) away from fire or high temperature objects. It may cause fire.





Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.





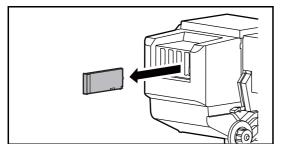
When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

#### Steps for ink cartridge

[1] [46] Ink End Press the [Enter] key.

- The buzzer stops.
- In the icons shown on the left, the Slot 4 and 6 ink bags need replacing.

[2]



Wear the plastic gloves, and then remove ink cartridges from lnk cartridge slots.

[3] 3 sec.

3 sec.

Prepare new ink cartridges and agitate it as described below.

- Place the lint-free cloth over the ink plug of the cartridge, turn the plug up and maintain vertical position for three seconds.
- Rotate cartridge upside down (plug facing down) and hold for three seconds.
- Repeat it 10 times.

[4]

Insert new ink cartridges into Ink cartridge slots.

- Make sure to match the ink cartridge color with the label of this printer.
- The arrow should face up.
- Insert all the way to the end.

#### [ Important!

Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.

#### Steps for High capacity ink pack adapter

**1.** Removing the High capacity ink pack adapter

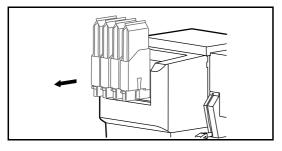
[1]

[46] Ink End

Press the [Enter] key.

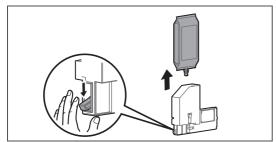
- The buzzer stops.
- In the icons shown on the left, the Slot 4 and 6 ink bags need replacing.

[2]



Wear the plastic gloves, and then remove High capacity ink pack adapters from the ink cartridge slots.

[3]

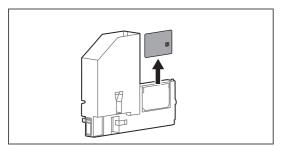


Lower the lock lever on the High capacity ink pack adapter and detach the empty ink bag.



Place the used ink bag in a plastic bag or the like and dispose of it in accordance with local ordinances and municipal instructions.

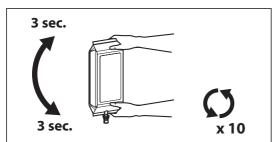
[4]



Remove the S/C card from the High capacity ink pack adapter.

## **2.** Attaching ink bag

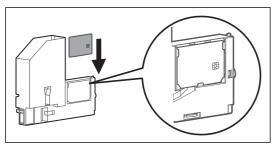
[1]



Prepare the new ink bag, and agitate it as instructed below.

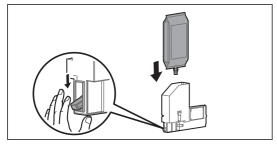
- Turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that 10 times.

[2]



Slide the S/C card into the tabs of the adapter.

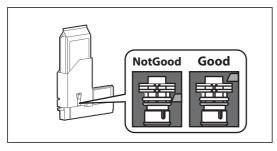
[3]



While lowering the lock lever of the High capacity ink pack adapter, insert an ink bag.

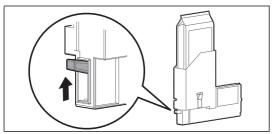
• Make sure to fully insert the ink bag into the High capacity ink pack adapter.

[4]



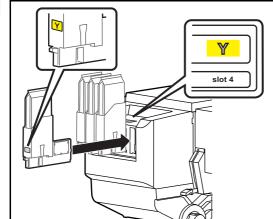
Confirm ink bag is fully seated by checking the lock mechanism is at the top of the ink delivery neck through the observation window, see proper placement in illustration left.

[5]



Make sure that the lock lever of the High capacity ink pack adapter is back to its original position.

[6]



Re-insert the High capacity ink pack adapters into Ink cartridge slots.

- Make sure to match the ink color with the label of this printer.
- Insert all the way to the end.

#### Important!

Make sure you insert the High capacity ink pack adapters into the original slots. Even when you have the same color ink packs, do not switch and insert them into different slots.

## Replacing Adapter's plug for High capacity ink pack adapter

When the plug life runs out, the error LED on the operation panel turns on and a message is displayed. Follow the procedure below to replace the plug.

[1]



Press the [Enter] key.

- [2] Follow the procedure described in the operation manual for High capacity ink pack adapter.
  - \*3.3 Replacing Adapter's plug"

[3]



When inserting the replaced adapter, the message on the left will appear.

• Press the [ - ] key.

[4]



Press the [Enter] key.

• The adapter's plug lifetime counter will be reset.

## [ Important!

- If the adapter's plug is not replaced, do not choose "Yes".
- Ink leakage may occur by continuing to use such adapter's plug.

## Emptying waste fluid tank

## Emptying waste fluid tank

In the following cases, move the waste fluid in the waste fluid tank into a container to discharge it.

- · When Waste fluid tank is more than half full
- When "Empty Waste Ink -> E" is displayed
- When "Full WasteInkTank" is displayed

### **Display messages**



Empty the waste fluid tank.

• The printer stops initial cleaning. After emptying the tank, press the [Enter] key to resume the cleaning.



The waste fluid tank has become full. Empty the waste fluid tank immediately.

• Printing or other operation will stop. It will resume when you have transfered the waste fluid.







Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.

Be cautious that ink does not get into your eye or make a contact with your skin.

When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

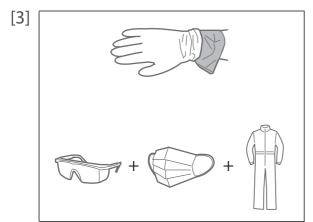
## 1. Transfer the waste fluid

[1] Prepare a container to put the waste fluid in.

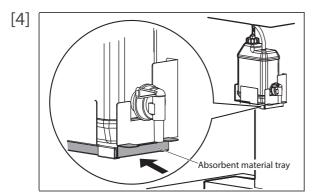
## Important!

The capacity of waste fluid tank is 2,000 ml. Make sure to prepare a container that has enough capacity when discharging waste fluid.

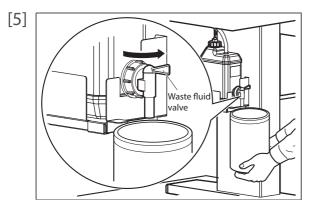
[2] Cover the floor beneath the waste fluid tank using paper you do not need or the like.



Wear personal protective equipment such as plastic gloves, goggles, protective mask or clothing.

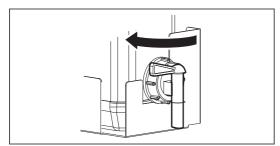


Press on the absorbent material tray of the waste fluid valve to store it.



Open the waste fluid valve, and transfer the waste fluid to the container.

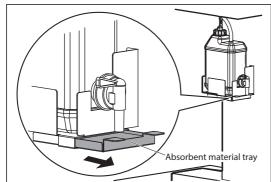
[6]



After pouring the waste fluid to the empty container, close the waste fluid valve securely.

Wipe the opening of Waste fluid valve with a cloth, etc. [7]

[8]



Pull out the absorbent material tray.

[9] Dispose of the waste fluid as an industrial waste product.

## **MARNING**



You are obligated to properly dispose of waste fluid from the printer in compliance with Wastes Disposal and Public Cleansing Act and local ordinances. Delegate disposal to an industrial waste disposal contractor.

## **Daily Maintenance**

## Flow of Daily Maintenance

This printer requires daily maintenance.

Follow the steps below to perform daily maintenance after you finish your printing for the day.

• "Perform Daily Maint." is prompted on the operation panel after certain period of time from the previous daily

Make sure to perform daily maintenance when prompted.

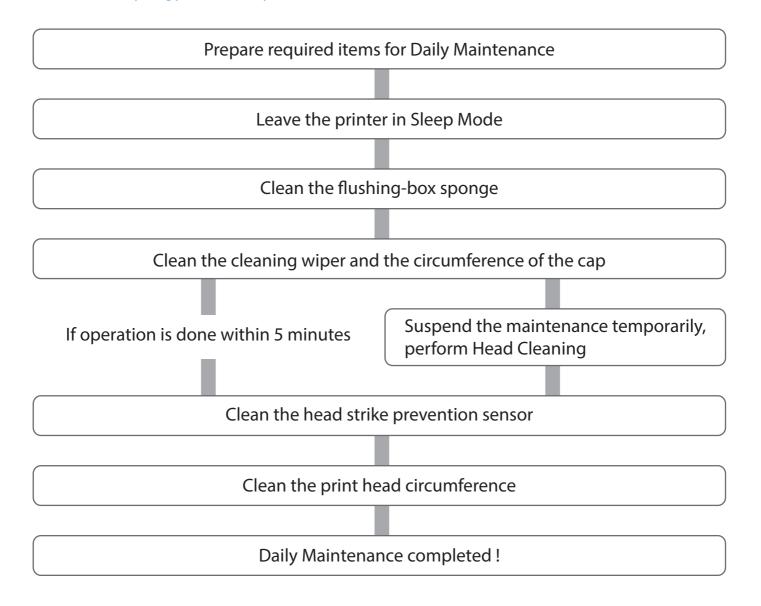


If you perform printing all day without entering to sleep mode, make sure to perform daily maintenance once a day. Failure to perform daily maintenance may affect print quality or result in damage to the printer.

To perform daily maintenance without entering to sleep mode, go to "Mnt.1: Daily Maint." on the operation panel.

**☞** "Maintenance 1: Daily Maintenance" P. 96

"Continuously using printer after daily maintenance" P. 126



### **Preparing for Daily Maintenance**

#### **Required Items**

Prepare the following items to perform daily maintenance. [1]





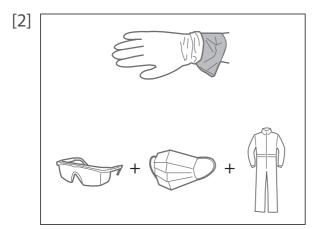
The proper way to store cleaning stick varies depending on where you use it. You will need at least 2 pieces of cleaning sticks for a daily maintenance.

## Important!

- Use a paper towel supplied with the printer or optional polyester knit wiper. DO NOT use a tissue. Lints or flakes on tissue may cause damage to the print head.
- DO NOT use non-dedicated maintenance cleaner.
- If you cannot suck up maintenance cleaner directly from the maintenance cleaner bottle using the dropper, use one of the plastic cup to pour the cleaner.

If the maintenance cleaner still remains in the plastic cup, put a plastic bag or wrap over the cup to keep out dust.

• If you want to purchase the optional maintenance cleaner, contact your local Mutoh dealer or nearest Mutoh sales office.



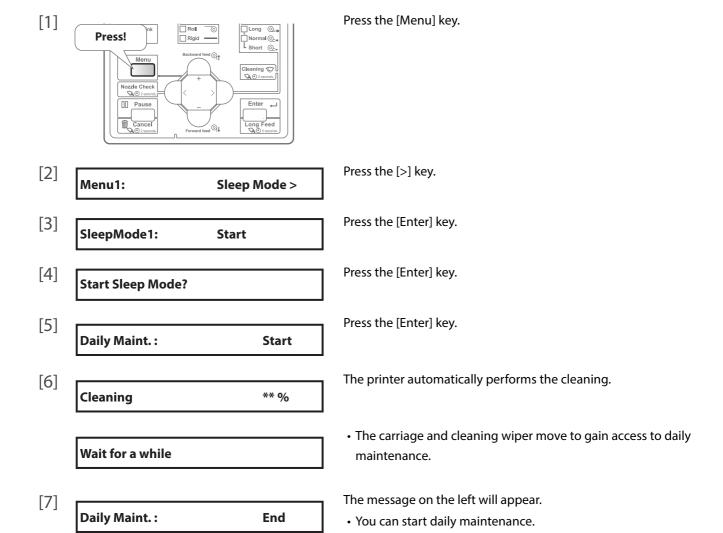
Wear personal protective equipment such as plastic gloves, goggles, protective mask or clothing.

## **A** CAUTION





Be cautious that ink does not get into your eye or make a contact with your skin. When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately. Wear personal protective equipment (supplied gloves or solvent-resistant gloves, goggles or protective eyewear, protective mask, protective clothing) to avoid skin contact with ink.



## | Important!

- Make sure to complete this maintenance within 5 minutes while the printer is in Daily maintenance state. If it takes longer, the stick can dry causing damage to the print head.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

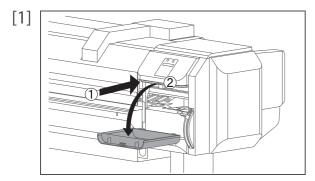
## **Performing Daily Maintenance**

## Important!

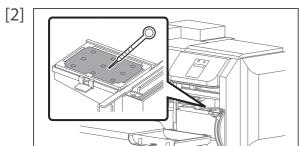
When performing daily maintenance, check the points below:

- Do not touch the cleaning wiper and the capping unit with your hands. If oil from your hands gets on those parts, this cleaning may not be performed properly.
- Do not touch the print head surface with fingers or a cleaning stick. It can cause damage to the print head.
- Always use a cleaning stick dampened with the dedicated maintenance cleaner in the plastic cup. DO NOT use non-dedicated maintenance cleaner. It may cause nozzle clogging.
- DO NOT touch the tip of the cleaning sticks with your finger. If finger oil gets on the stick, it will damage the print head.

## **1.** How to clean the flushing-box sponge



Open the maintenance cover on the right.



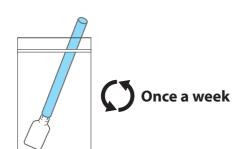
Use the dropper to moisten the flushing-box sponge with maintenance cleaner.

· Amount used: 3.0 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

[3]



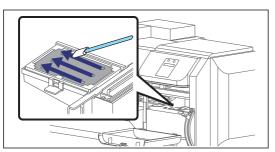
Prepare a cleaning stick for cleaning the flushing-box sponge.



The cleaning stick can be used for 1 week.

Change the cleaning stick once a week, or when the ink on the stick cannot be removed.

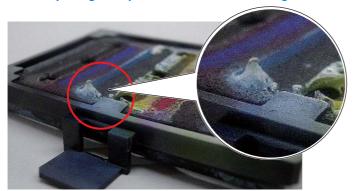
[4]



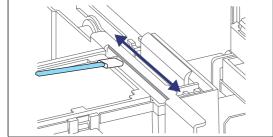
Use the cleaning stick to clean the whole area of sponge.

If you cannot remove ink clumps using the cleaning stick, replace the flushing-box sponge.

"Replacing absorption material for the flushing box" P. 131

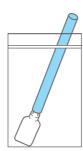


[5]



Clean off the ink on the left edge of the part, located between the flushing box and cleaning wiper.

[6]



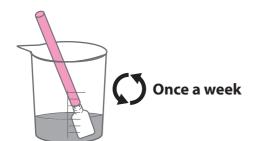
After the cleaning is done, put the cleaning stick in the plastic zipper bag and close the zipper to store.



Make sure to close the zipper firmly to avoid dust in the bag.

## **2.** How to clean the cleaning wiper and capping unit

[1]



Prepare another cleaning stick to clean the cleaning wiper and around the capping unit.

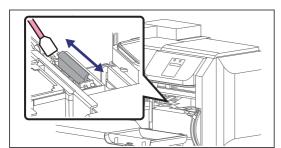
 Pour 30 ml of dedicated maintenance cleaner into the plastic cup and dip the foam tip of the cleaning stick in it.

## [ Important!

- The cleaning stick submerged in the plastic cup can be used for 1 week.

  Change the cleaning stick once a week, or when the ink on the stick cannot be removed.
- Make sure to change the maintenance cleaner once a week.
- If the cleaning stick gets dirty while cleaning, submerge the foam tip of the stick into the maintenance cleaner in the cup.

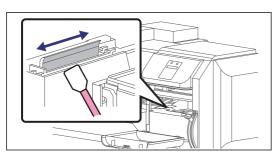
[2]



Wipe the cleaning wiper with a cleaning stick.

• Wipe the left side surface of cleaning wiper going back and forth.

[3]



Wipe the right side surface of cleaning wiper going back and forth.

[4] Check that the cleaning wiper and the area around are clean.

Left side of the cleaning wiper







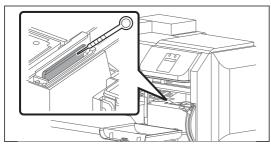
Right side of the cleaning wiper







[5]



Use a dropper to moisten the cleaning wiper with maintenance cleaner.

• Amount used: 5.0 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

Clean this part (grey)

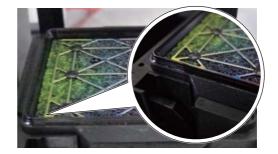
DO NOT touch the absorber (yellow)

Use the cleaning stick to clean around the rubber part of the capping unit to remove the ink deposits and dust.

[7] Check that the capping unit and the area around are clean.







Use the dropper to moisten the absorber of the capping unit with maintenance cleaner.

• Amount used: 1.5 ml



Do NOT use the maintenance cleaner in the plastic cup that the cleaning stick is submerged.

Moisten the lint-free cloth with maintenance cleaner and clean the air valve surface to remove the ink deposits.

✓ Note

Wear plastic groves to avoid contact with maintenance cleaner.

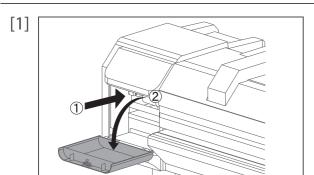
[10] Next clean the head strike prevention sensor.

**"How to clean the head strike prevention sensor" P. 123** 



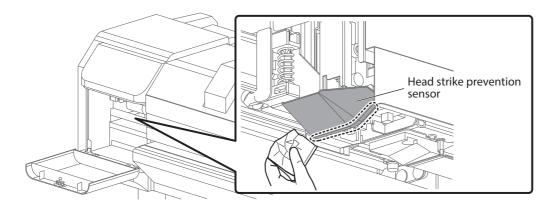
- Standard cleaning time should be within 5 minutes.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

## **3.** How to clean the head strike prevention sensor



Open the maintenance cover on the left.

- [2] Check if ink stains on the bottom of the sensor.
  - If stains, use the paper towel moistened with a few drops of cleaning fluid and gently wipe off the ink on the sensor.

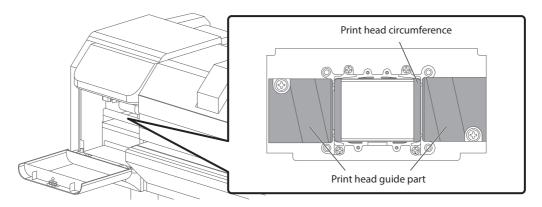


## | Important!

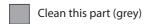
- Always wear protective gloves to avoid direct contact with cleaning fluid.
- To avoid damage to the sensor while cleaning, use the other hand to hold it to stabilize.
- While cleaning, do not apply too much pressure. It may damage the sensor.
- Next clean the print head circumference. [3]
  - **™** "How to clean around the print head" P. 124

## **4.** How to clean around the print head

- [1] Look at the bottom side of the carriage and check if dusts and ink lump are adhered.
  - Print head circumference (silver metal part)
  - Print head guide part (black plastic part)

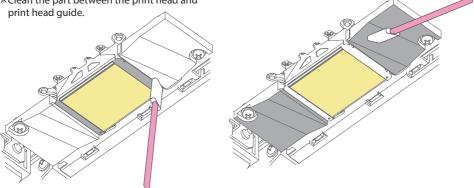


[2] Use the cleaning stick to remove the ink deposits or dust on the bottom of the carriage.



DO NOT touch the surface of a print head (yellow)

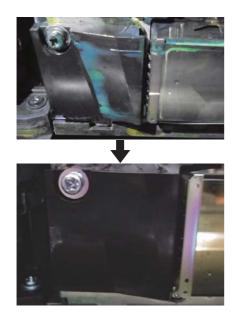


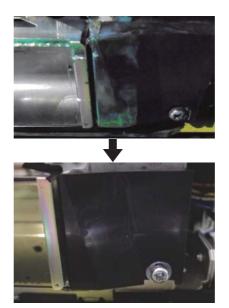




- Do not touch the platen or media guide. The temperature may be high.
- If maintenance cleaner is splashed onto the printer, use a lint-free cloth to wipe it off.

[3] Check that the area around the print head is clean.





[4] Close the maintenance cover on the right.

[5]



After cleaning, leave the cleaning stick dipped in dedicated maintenance cleaner.



- Using plastic bag or wrap, cover the plastic cup with dedicated maintenance cleaner inside to keep out dust.
- Check that the lid of the maintenance cleaner is shut properly and store it.
- [6] Next finish the daily maintenance.

## **5.** Finishing daily maintenance

[1] Daily Maint.: End

Press the [Enter] key.

- The printer automatically enters to sleep mode.
- Use a paper towel to wipe the maintenance cleaner off the dropper. [2]
- Now the daily maintenance is complete. [3]

## Continuously using printer after daily maintenance

In following cases, clean the daily maintenance parts.

- If faint print or dot missing still persists even after head cleaning has been performed.
- If you perform printing all day without entering to sleep mode and you need to perform daily maintenance.

#### **Preparation:**

See "Preparing for Daily Maintenance" P. 117 to prepare items required for the maintenance.

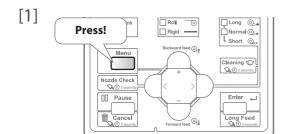


If you want to continuously use the printer after this maintenance, follow the steps below.

If you will not use the printer after this maintenance, enter to sleep mode and then perform maintenance.

**™ "Daily Maintenance" P. 116** 

**1.** Putting the printer into the Daily maintenance mode



Press the [Menu] key.

[2] Menu1: Sleep Mode >

The message on the left will appear.

[3] Menu7: Maintenance >

Press the [-] key several times, to bring up the display on the left.

- Press the [>] key.
- [4] Mnt.1: Daily Maint.

Press the [Enter] key.

Daily Maint.: Start

Press the [Enter] key.

Cleaning \*\* %

The printer automatically performs the cleaning.

Wait for a while

 The carriage and cleaning wiper move to gain access to daily maintenance.

[7] Daily Maint.: End

The message on the left will appear.

• You can start daily maintenance.

## **2.** Cleaning daily maintenance parts

The maintenance procedure and parts to be cleaned are the same as "Daily Maintenance" P. 116. Follow the steps described in "Performing Daily Maintenance" P. 119 to clean each part.

- "How to clean the flushing-box sponge" P. 119
- "How to clean the cleaning wiper and capping unit" P. 120
- "How to clean the head strike prevention sensor" P. 123
- "How to clean around the print head" P. 124

## Important!

- Make sure to complete this maintenance within 5 minutes while the printer is in Daily maintenance state.
- If maintenance is likely to take more than 5 minutes, suspend it and perform head cleaning before resuming the maintenance.

## **3.** Finishing maintenance

Close the front cover and the maintenance cover. [1]

[2] Press the [Enter] key. **Daily Maint.: End** 

- Use a paper towel to wipe the maintenance cleaner off the dropper. [3]
- Now the maintenance is complete. [4]

# Cleaning each part

To use this product always in its best condition, please clean periodically.

## Head cleaning

When nozzle missing is found in nozzle check, conduct head cleaning. Head cleaning consumes ink.

There are several cleaning modes in this product. Please use them accordingly based on your usage condition.

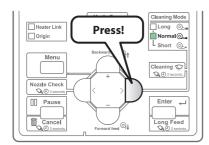
Short cleaning	Consumes less ink than Normal cleaning.
Normal cleaning	Conduct nozzle check before and after printing, and use when nozzle missing is found.
Long cleaning	Consumes more ink than Normal cleaning. When nozzle missing still occurs after Normal cleaning, conduct Long cleaning.
Little Charge	Though much better cleaning results can be expected than Long cleaning, it consumes a large amount of ink.  *This mode cannot be selected via the "Cleaning" key. Select it from the Cleaning submenu in the Panel Setting Menus.
	₩ "Menu 5: Cleaning" P. 94
Initial Charge	Gives a rather higher cleaning effect than "LittleCharge", but also consumes rather more ink. *This mode cannot be selected via the "Cleaning" key. Select it from the Cleaning submenu in the Panel Setting Menus.



Comply strictly with the following when you performing "Little Charge" or "Initial Charge". If charging is interrupted, ink will be lost when charging is resumed.

- Do not open the Front cover or the Maintenance cover.
- Do not use ink cartridges (ink bags) that have little ink remaining.

[1]



Use the [Cleaning] key to select a cleaning mode.

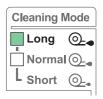
• The "Cleaning Mode" indicators will change each time the key is pressed.



- You can alternatively do this via the MSM's remote panel.
- The "Cleaning Mode" indicators will change as shown below.





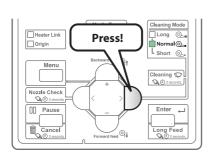


**Short Cleaning** 

**Normal Cleaning** 

**Long Cleaning** 

[2]



Press the [Cleaning] key for more than two seconds.

· Cleaning will start.

- [3] Perform Nozzle Check.
  - If there is still nozzle missing, repeat cleaning and nozzle check.
    - **☞** "Steps for head cleaning" P. 129



- · When nozzle missing remains even after repeating normal cleaning several times, perform Long cleaning.
- When nozzle missing remains even after repeating Long cleaning several times, conduct "Continuously using printer after daily maintenance"
  P. 126
- If the nozzle missing still is not rectified, perform "LittleCharge" via the Cleaning menu in the Panel Setting Menus.

## Soak Cleaning

#### **Cleaning period:**

When nozzle missing is found in nozzle check, conduct head cleaning. Head cleaning consumes ink.

- Weekly (recommended)
- Nozzle clogging or nozzle deflection persists after cleaning attempt.

For procedures, download the soak cleaning procedure sheet from MUTOH Club (https://mutoh-club.com/mutoh/guser/).

## Inside cleaning

## **Cleaning period:**

- · Monthly
- When dust or ink stains are visible

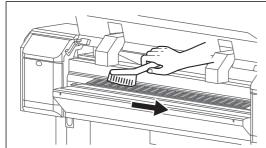
#### **Preparation:**

- · Soft brush
- · Soft cloth

#### Steps

- Remove the media. [1]
- Open the front cover. [2]

[3]

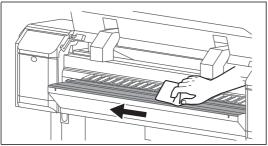


Brush off dusts on the pressurizing rollers with a soft brush.



Do not blow off dusts inside the product with a gas duster. Dust can attach to moving parts, causing abnormal sound or malfunctions.

[4]



Use a wet, tightly-wrung soft cloth to clean the media guide.

[5] Close the front cover.

## Replacing consumable parts

### Replacing absorption material for the flushing box

The flushing box is a part that keeps receiving ink discharged from the print head. Please replace the absorption material for the flushing box periodically. If used without replacing, it can cause damage to the print head.

### **Replacing period:**

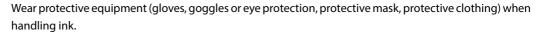
- · When the flushing-box frame was deformed.
- · When ink clumps have accumulated on the flushing-box sponges beyond the flushing-box frame.

#### **Preparation:**

- Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing)
- · Absorption material for the flushing box
- Paper you can get dirty (paper which ink will not bleed through)





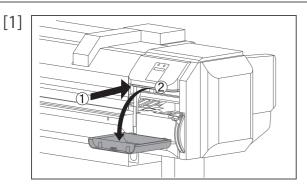




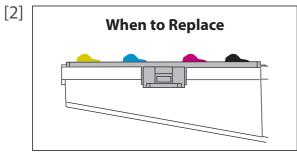
Be cautious that ink does not get into your eye or make a contact with your skin. When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is,

it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

## 1. Checking steps



Open the maintenance cover on the right.



Check the absorption material for the flushing box.

- When the flushing-box frame was deformed or there are lumps of ink rise from the frame of the flushing box, it is time to replace.
- · Close the maintenance cover.

## 2. Moving print head out of capping station

Press! | Roll | Long @\_ | Normal @\_ | Short @\_ | Short @\_ | Cleaning @\_

Press the [Menu] key.

[2] Menu1: Sleep Mode >

The message on the left will appear.

[3] Menu7: Maintenance >

Press the [-] key several times, to bring up the display on the left.

• Press the [>] key.

[4] Mnt.1: Daily Maint.

The message on the left will appear.

[5] Mnt. 3: Cap Out

Press the [-] key several times, to bring up the display on the left.

• Press the [Enter] key.

[6] Cap Out: Start

Press the [Enter] key.

Wait for a while

- The carriage moves to the center of the printer.
- The cleaning wiper moves upward.

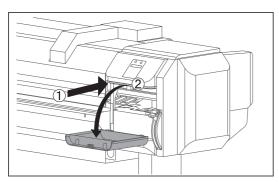
[7] Cap Out: End

The message on the left will appear.

• You can start replacement.

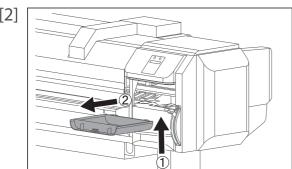
## **3.** Replacing steps

[1]



Open the maintenance cover on the right.

[2]



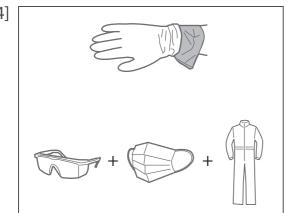
Detach the maintenance cover.

Cover the platen with the paper you can get dirty. [3]

## | Important!

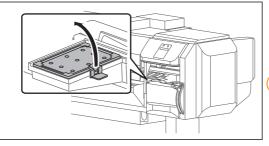
Ink may drip from the absorption material for the flushing box. We recommend covering the floor with paper as well.

[4]



Wear personal protective equipment such as plastic gloves, goggles, protective mask or clothing.

[5]



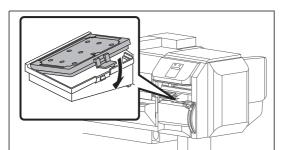
Pull the tab up of the absorption material for the flushing box, and release the hook.

Then remove the absorption material for the flushing box.

## Important!

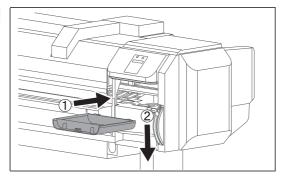
When removing the absorption material for the flushing box, be cautious of ink drops.

[6]



Attach new absorption material for the flushing box.

[7]



Attach the maintenance cover.

[8] Close the maintenance cover.

[9]

Cap Out: Start Press the [Enter] key.

The message on the left will appear.

• That ends the procedure.

## Replacing the cleaning wiper

The cleaning wiper is an essential part to make printing consistent. Please replace it periodically.

#### **Replacing period:**

· Approx. every six months

#### **Preparation**

- · Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing)
- · Absorption material for the flushing box
- Paper you can get dirty (paper which ink will not bleed through)







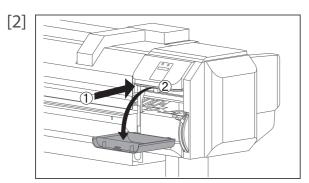
Wear protective equipment (gloves, goggles or eye protection, protective mask, protective clothing) when handling ink.

Be cautious that ink does not get into your eye or make a contact with your skin.

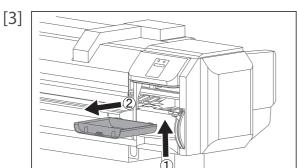
When ink gets into your eye or make a contact with your skin, wash with water immediately. If left as it is, it may cause red eye or light inflammation. If it is necessary, please see your doctor immediately.

#### **Replacing Steps**

- [1] Move the print head out of capping station.
  - The moving print head out of capping station P. 132

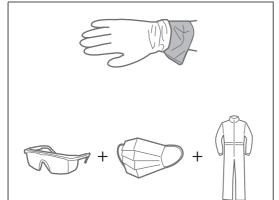


Open the maintenance cover on the right.



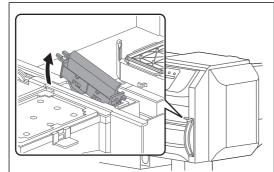
Detach the maintenance cover.

[4]



Wear personal protective equipment such as plastic gloves, goggles, protective mask or clothing.

[5]



Remove the cleaning wiper.

 Lift the cleaning wiper hook and release the hook. Then, remove the cleaning wiper.



When removing the cleaning wiper, be cautious of ink drops.

[6]

Follow the steps below to install new cleaning wiper.

- Slide the front side of the new cleaning wiper into its slot.
- Press the wiper hook down until it clicks into place.



Do NOT touch the cleaning wiper rubber with your bare hand. If finger oil gets on the rubber, it will damage the print head.

[7] Attach the maintenance cover, and then close it.

[8]

Cap Out: End
--------------

Press the [Enter] key.

Cap Out: Start

The message on the left will appear.

• That ends the procedure.

## Moving or transporting the printer

This section describes how to move or transport the printer.

## Moving the printer

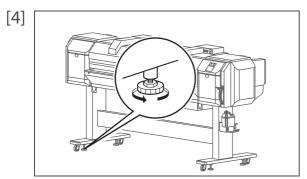
This section describes how to move the printer.

## | Important!

- When moving the printer, make sure to maintain a horizontal position.
- Do not tilt, set against something or place this product upside down. Otherwise the ink may leak or the handling mentioned above may cause abnormality.
- When moving this printer, always empty the waste ink tank even moving short distance. If ink splashes inside the waste ink tank while being moved, it can cause damage.

## **1.** Preparation before moving

- [1] Turn OFF the printer.
  - Turning the power OFF" P. 27
- Dispose of waste fluid. [2]
  - **Temptying waste fluid tank" P. 113**
- Remove all the cables, such as Power cord set. [3]



Loosen the four adjusters of Stand as shown in the left.

[5] Move the printer.

## 2. Reinstalling

- [1] Select a suitable place for installation.
  - Startup Guide
- [2] Move and install the printer to the location.
- [3] Attach Cables, such as Power cord set.
- [4] Perform Nozzle check, and then confirm that there is no clogging in Print head.
  - "Nozzle check steps" P. 44
- [5] Perform print quality adjustment.
  - **Print quality adjustment steps" P. 48**

## Transporting the printer

When transporting the printer, make sure to pack it in the same condition as purchased, using protective and packing materials to protect the printer from vibration and shocks.



When transporting the printer, consult the MUTOH product dealer at your point of purchase.

## Long Storage and Initial Charge

## If not using the printer for a long period of time

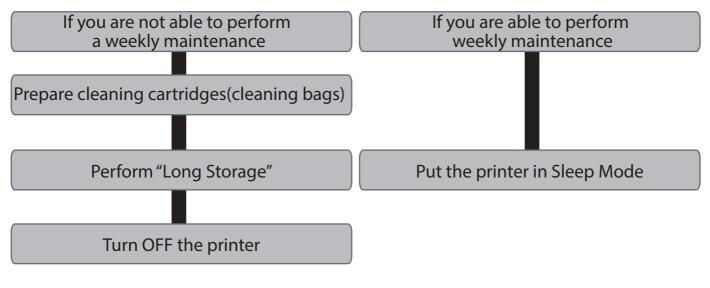
When you may not be able to run a weekly cleaning on the printer that is in sleep mode: Perform "Longstore" and then power off the printer. It allows you to store the printer for up to one month (30 days).



If you are able to perform weekly maintenance, you can store it in sleep mode.

Training Sleep Mode" P. 29

The procedures of Long Storage is as follows.



Important!

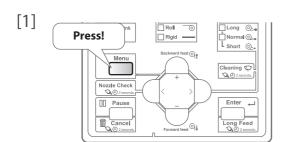
Be sure to perform daily maintenance before turning the printer off.

If you turn the power off without performing daily maintenance, the nozzle may become clogged.

## **Performing Long Storage**

#### Required item:

- Cleaning cartridges or Cleaning bags (8 bags)
- **1.** Steps for discharging ink



Press the [Menu] key.

[2] Menu1: Sleep Mode >

The message on the left will appear.

[3] Menu7: Maintenance >

Press the [-] key several times, to bring up the display on the left.

• Press the [>] key.

[4] Mnt.1: Daily Maint.

The message on the left will appear.

[5] Mnt. 2: Long Storage

Press the [-] key, to bring up the display on the left.

• Press the [Enter] key.

Long Storage: Start

Press the [Enter] key.

[7] Remove Cartridges

When the message on the left appears, remove all ink cartridges (or High capacity ink pack adapters) from the ink cartridge slots.

[8] Empty Wastelnk -> E

When the message on the left appears, transfer the waste fluid into a container.

Temptying waste fluid tank" P. 113

• Press the [Enter] key.

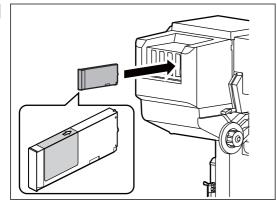
## Steps for ink cartridge

[1]

### Insert CleaningCart.

The message on the left will appear.

[2]



Insert cleaning cartridges into Ink cartridge slots.

- The arrow should face up.
- Insert all the way to the end.

**Busy-Washing** 

The printer starts charging cleaning fluid.

[3]

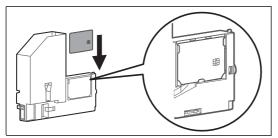
[ All ] Discharged When cleaner discharging is complete, the message to the left is displayed.

[1] [

#### Insert CleaningCart.

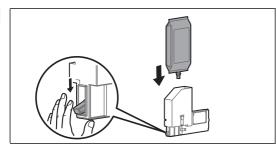
The message on the left will appear.

[2]



Slide the smart chip card into the tab on the High capacity ink pack adapter to install it.

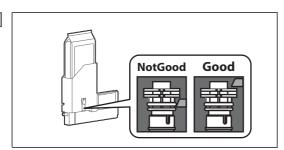
[3]



Lower the lock lever on the High capacity ink pack adapter and insert the cleaning bag.

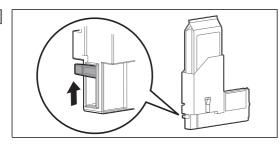
• Insert all the way to the end.

[4]



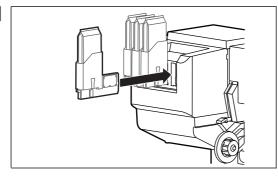
Confirm that the cleaning bag is inserted all the way and is locked.

[5]



Confirm that the lock lever on the High capacity ink pack adapter is in its original position.

[6]



Insert the High capacity ink pack adapter.

• Firmly insert it all the way in.

**Busy-Washing** 

The printer starts charging cleaning fluid.

[7]

[ All ] Discharged

When cleaner discharging is complete, the message to the left is displayed.

## **3.** Steps for turning OFF the printer

Prepare items required for daily maintenance. [1]

**"Preparing for Daily Maintenance" P. 117** 

[2]



Press the power button to turn the power OFF.

- This product starts its powering off operations.
- The blue light becomes OFF.

[3] **Daily Maint.:** Start Press the [Enter] key.

[4] Cleaning

\*\* %

The printer automatically performs the cleaning.

Wait for a while

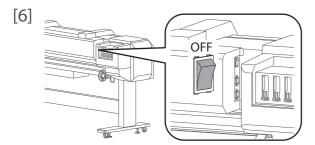
• The carriage and cleaning wiper move to gain access to daily maintenance.

[5] **Daily Maint.: End**  The message on the left will appear.

- · You can start daily maintenance. **Performing Daily Maintenance** P. 119
- After the daily maintenance is complete, press the [Enter] key.

**Power Off Printer** 

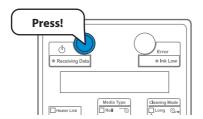
The printer will start turning off.



Turn OFF the power switch of Blower heater.

## Performing initial charging after head cleaning

[1]



Turn the printer ON.

- Blue light becomes ON.
- The product starts initialization operations.

Start Ink Charge -> Enter

When the message to the left is displayed, press the [Enter] key.

[3] Empty Wastelnk -> E

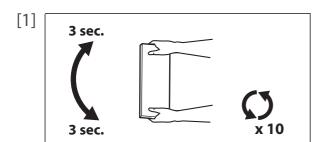
When the message on the left appears, transfer the waste fluid into a container.

**Temptying waste fluid tank" P. 113** 

[4] Insert Ink Cartridges

The message on the left will appear.

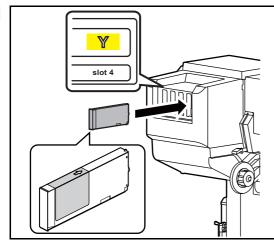
#### Steps for ink cartridge



Prepare new ink cartridges and agitate it as described below.

- Place the lint-free cloth over the ink plug of the cartridge, turn the plug up and maintain vertical position for three seconds.
- Rotate cartridge upside down (plug facing down) and hold for three seconds.
- Repeat it 10 times.

[2]



Insert new ink cartridges into Ink cartridge slots.

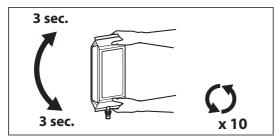
- Make sure to match the ink cartridge color with the label of this printer.
- The arrow should face up.
- Insert all the way to the end.

#### ( Important!

- Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.
- Printer with 5-color or 7-color configuration only:
   Avoid using the cleaner cartridge (or cleaner bag) that you used for head cleaning as it may not have enough ink for initial ink charging.

#### Steps for High capacity ink pack adapter

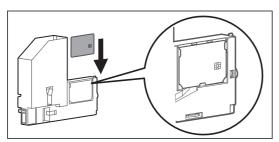
[1]



Make sure you agitate the ink bag after you prepare it.

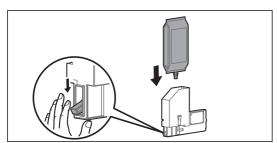
- Turn the ink plug upward and wait for three seconds.
- Next, turn the ink plug downward and wait for three seconds.
- Repeat that 10 times.

[2]



Slide the smart chip card into the tab on the High capacity ink pack adapter to install it.

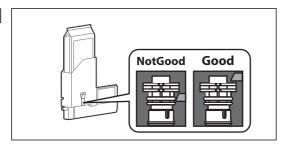
[3]



Lower the lock lever on the High capacity ink pack adapter and insert the ink bag.

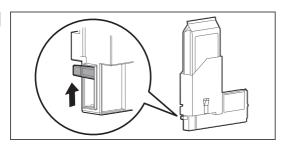
• Insert all the way to the end.

[4]



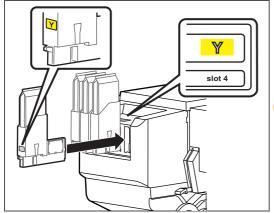
Confirm that the ink bag is inserted all the way and is locked.

[5]



Confirm that the lock lever on the High capacity ink pack adapter is in its original position.

[6]



Insert the High capacity ink pack adapter.

- Match the colors of the label on the printer and the label on the High capacity ink pack adapter.
- · Firmly insert it all the way in.

#### | Important!

- Make sure you insert the ink cartridges into the original slots. Even when you have the same color ink cartridges, do not switch and insert them into different slots.
- Printer with 5-color or 7-color configuration only: Avoid using the cleaner cartridge (or cleaner bag) that you used for head cleaning as it may not have enough ink for initial ink charging.

\*\*% **Ink Refill** 

The message on the left will appear.

• Ink charging begins.



#### **A** CAUTION



During ink charging, make sure:

- Not to turn OFF the printer.
- Not to unplug the power cable of the printer.
- Not to open the front cover.
- Not to open the maintenance cover.
- · Not to raise the media loading lever.



When ink charging is complete, the message to the left is displayed.



If the printer perform the nozzle check printing immediately after the initial ink charge is complete, the following results may

- Printed lines become blurred.
- The data is partially not printed.

In such cases, follow "Menu 5: Cleaning" P. 94 and perform "Little Charge". Then, check the print result.

If there is no improvement in the print result even after performing "Little Charge", leave the printer unused for an hour or more. Then perform "Little Charge" again and check the print result.

If there is still no improvement, contact your local Mutoh dealer.

# Chapter 4 Appendix

Messages and Error Messages	148
Status messages	148
Error message display and remedies	151
Error requiring restart	154
Troubleshooting	155
Installation and initial setup troubleshooting	155
Boot-up troubleshooting	156
Media-related troubleshooting	157
Printing-related troubleshooting	159
The media is jammed	
Specifications of this product	164
List of specifications	164
Options / Supply list	167
Revision History	167

## Messages and Error Messages

This section describes messages displayed during normal printer operation or when errors occur, and solutions to the messages.

### Status messages

This section describes messages displayed during printer normal operation.

When the product is operating correctly, each operation status is displayed on the operation panel as below.

Display	Description		
Ready to Print	Standby (Media is loaded).		
Media End	Standby (Media is not loaded).		
	TLoading the media" P. 31		
Receiving	Receiving data.		
Converting	Analyzing data.		
Printing	Under printing.		
Print Remain: XXX.Xm	Displays the length of the data that has not been printed in meters for the data currently being printed.		
Remain Time: XXX.Xmin	Displays the time remaining to print in minutes for the data currently being printed.		
Roll Remain: XXX m	Displays the remaining length of the roll media currently set in meters.		
Warming Up	Warming up Blower heater.		
Skip -> Enter	You can print while warming up Heater. Press the [Enter] key to print.		
Cleaning **%	Cleaning the head. Please wait a while.		
Moving Origin Pos.	The print head is moving to the original printing position in the Origin setup menu. Please wait a while.		
** Initializing **	Initializing the setting in the Initialization menu. Please wait a while.		
*** Press 2sec. ***	The [Cleaning] key or the [Nozzle Check] key is pressed for less than 2 seconds.  Press the key for more than 2 seconds again.		
Lever Up	Set the media, and then lower the Media loading lever.		
Media: Type ** OK?	Initializing the media.		
Media Initial	Please wait a while.  (** represents the set User type.)		
Warning! *.* mm	Media thickness detection is set to Off. Check whether the thickness of the media loaded is as displayed; if it is wrong, enter the correct value.		
Misuse Damage Unit >	Warns that the wrong setting for the media thickness may damage Print head. To proceed, press the [>] key on Operation panel for a while.		
<e> Skip, <can> Detect</can></e>	Press the [Enter] key to skip the media thickness detection.  Press the [Cancel] key to detect the media thickness.		
Perform Daily Maint.	Make sure to perform daily maintenance when prompted.  "Continuously using printer after daily maintenance" P. 126		

Display	Description		
Perform Nzl Chk -> E	The printer has been in sleep mode for one week. Press the [Enter] key to return the printer to Normal operation. Agitate ink cartridges (ink bags), and then perform Nozzle Check.		
maintenance **%	Performing the color maintenance. Wait for a while.		
Life Times [Pump]	The operational life of the pump motor has almost expired. (Continues operation) Contact your local MUTOH dealer.		
Life Times [CR Motor]	The operation life CR motor has almost expired. (Continues operation) Contact your local MUTOH dealer.		
Life Times [PF Motor]	The operational life of the PF motor has almost expired. (Continues operation) Contact your local MUTOH dealer.		
Life Times [C Pump]	The operational life of the Circulation pump has almost expired. (Continues operation) Contact your local MUTOH dealer.		
[*] Change Plug	Connector rubber for High-capacity ink pack adapter is at the end of its life.  Replace Connector rubber of High-capacity ink pack adapter.  Operation manual for High-Capacity Ink Pack Adapter		
Power Off	Turning OFF the printer.  Wait for a while.		
S/C Reading	Reading the S/C card.		
Ink Circulation	Ink is circulating inside the printer.		
Shake White Cart.	Agitate the White (Wh) ink cartridges (ink bags).		
Shake Color Cart.	Agitate all the color ink cartridges (ink bags) except the White (Wh) ink.		
Shake ALL Cart.	Agitate all ink bags.		
Ink Not Expired?	Check the "Use Before" date printed on the ink cartridges (ink bags).  If the expiration date has passed, replace with a new ink cartridges (ink bags Press the [Enter] key to clear the message.  "Replacing ink" P. 109		
Roll Near End: *m	The remaining roll paper count is almost 0. The remaining roll paper is *m.		
Installed Wiper? -> No	Install the cleaning wiper.  Startup Guide		
Installed Wiper? -> Yes	After installing the cleaning wiper, press the [Enter] key.		
Start Ink Charge -> E	Ink charging starts. Press the [Enter] key.		
Comb.: *[*******]	Select the ink configuration you want to use from 4-color, 5-color, 7-color or 8-color.		
Wash retry? Yes	Performs cleaning using the cleaning fluid. Press the [Enter] key.		
Insert CleaningCart.	Washing Print head. Install cleaning cartridges(cleaning bags).		
Busy-Washing	<ul><li>Initial charging, ejecting filler fluid.</li><li>Washing the print head by cleaning fluid.</li><li>Please wait a while.</li></ul>		

Display	Description	
Remove Cartridges	Washing Print head or discharging ink. Remove ink cartridges (High capacity ink pack adapters).	
Insert Ink Cartridges	Charging the ink. Insert ink cartridges (High capacity ink pack adapters).	
Ink Refill **%	Charging the ink. Please wait a while.	
Empty Wastelnk -> E	Transfer the waste fluid from the waste ink tank into a container, and press the [Enter] key.  "Emptying waste fluid tank" P. 113	

### Error message display and remedies

This section describes error messages and remedies.

Error messages are displayed when certain failures occur during printer operation.

If an error that can be displayed occurs, the printer may display the following error messages on the operation panel and stop operation.

Display	Description		
Cover Open	Front cover is open. Close Front cover.		
Maint. CoverL Open	Left Maintenance cover is open. Close Maintenance cover.		
Undefined Media	Media detection has failed. (Stops operation) Reload the media.		
Media Slant	Media is fed obliquely. (Stops operation) Reload the media.		
Obstacle Detection -> E	An obstacle has been detected. (Stops operation) Remove the obstacle, and press the [Enter] key.  "When the sensor detects obstacles" P. 25		
PrintRestart? No	To cancel the job, press the [Enter] key.		
PrintRestart? Yes	To resume the job, press the [Enter] key.		
Change: X.X mm ->	Enter the value to adjust the head height for the media, then press the [Enkey. When you press the $[>]$ key on the Operation panel, the setting value (0.5) and the input adjustment value (0.1) are displayed, as in "Thick. + A 0.5 + 0.1".		
Is it preserved? No	The current thickness adjustment value in the user type remains unchang (the value entered is enabled only for the job currently printing).		
Is it preserved? Yes	The current thickness adjustment value in the user type is overwritten value value entered.		
End Of Roll	The roll media has run out. (Stops operation)  Load a new roll media.  "Loading the media" P. 31		
[*******] Ink Low	Slot * ink is low. Get a replacement bag ready.  Replacing ink" P. 109		
[*******] Ink End	Ink has run out. (Stops operation) Replace with a new ink cartridges (ink bags).  "Replacing ink" P. 109		
[********] No Cartridge	Ink cartridge (High capacity ink pack adapter) is not inserted. (Stops operation) Insert Ink cartridge (High capacity ink pack adapter).		
[*******] Discharged	Ink is not filled.  Perform initial ink charging.  "Performing initial charging after head cleaning" P. 144		
Full WasteInkTank	The waste fluid tank has become full. (Stops operation) Immediately transfer the waste fluid into a container.  "Emptying waste fluid tank" P. 113		

Display	Description	
[*******] S/C ReadErr	Reading S/C Card has been failed. Insert S/C Card again.	
[*******] S/C Col.Err	Ink cartridges (High capacity ink pack adapters) are inserted in wrong slot Insert ink cartridges (High capacity ink pack adapters) correctly again.	
[*] S/C Ink Err	The ink cannot be used for this printer. Contact your local MUTOH dealer.	
[*] S/C CodeErr	Inserted ink cartridge (ink bag) is not a proper one. Contact your local MUTOH dealer	
[*] Broken Chip	S/C Card has been broken. Insert new ink cartridge (ink bag).	
[*] Check Ink	Ink cartridges (High capacity ink pack adapters) were not recognized correctly. Insert ink cartridges (High capacity ink pack adapters) correctly again. Contact your local MUTOH dealer.	
[*] Reseat Cart.	You need to reinsert ink cartridges (High capacity ink pack adapters) due to the smart chip card reading failure.  "Replacing ink" P. 109	
Heater Error <e> Print <can> Cancel</can></e>	The Blower heater temperature has not reached the set temperature within the specified time.  • Press the [Enter] key to print. Print result is not guaranteed.  • Press the [Cancel] key to cancel printing.  Turn Blower heater OFF and restart.  If this still does not clear the problem, contact your local MUTOH dealer.	
Ready to Print/PFErr	PF origin sensor could not detect the origin position for feeding. You can still print, but print quality is not guaranteed. If this still does not clear the problem, contact your local MUTOH dealer.	
ObstacleDetection->E	An obstacle has been detected. Press the [Enter] key, and reset the media place.  "Loading the media" P. 31	
Obstacle Sensor Err	An error occurred in the obstacle sensor. (Stops operation) Use your hand to move the sensor and check that it can move up and dow properly. If this still does not clear the problem, contact your local MUTOH dealer.	
Temperature too low	Printer's temperature is too low. Adjust room temperature. Wait until the warning message is no longer displayed.  "Specifications of this product" P. 164	
Temperature too high	Printer's temperature is too high. Adjust room temperature. Wait until the warning message is no longer displayed.  "Specifications of this product" P. 164	



- [\*\*\*\*\*\*\*] in the error message indicates the target ink cartridge slot.
- $\bullet \ \ If "Ink End" and "No Cartridge" occur at the same time, "No Cartridge" message has priority to be displayed.$

#### Smartchip recovery

When the following message is prompted on the operation panel, a smartchip error such as broken chip may have occurred in the Ink cartridge (High capacity ink pack adapter).

Check that the correct color is inserted in the cartridge slot and perform smartchip recovery.

This will allow you to continue to print.

To perform smartchip recovery, do one of the followings according to the message appeared.

Display	Description
[*******] S/C Recog. Err.	An Ink cartridge (High capacity ink pack adapter) that needs smartchip recovery may have been installed.
	Remove the Ink cartridge (High capacity ink pack adapter) and reload it.
	If the printer is still unable to read it, install a new lnk cartridge (High capacity ink pack adapter with new lnk bag).
	<ul> <li>If a message "[****] Check Color -&gt;E" appears after the lnk cartridge (High capacity ink pack adapter) is reloaded, follow the message "[****] Check Color -&gt;E" to operate.</li> </ul>
[****] Check Color ->E	An Ink cartridge (High capacity ink pack adapter) that needs smartchip recovery may have been installed.
	<ul> <li>Check that the ink color of the cartridge (ink bag) inserted is correct.</li> <li>In case of wrong color insertion, load a correct lnk cartridge (High capacity ink pack adapter).</li> </ul>
	<ul> <li>If color is correct, press the [Enter] key. The printer will perform smart chip recovery and will continue to print.</li> </ul>



• During smartchip recovery execution, the ink cartridge being recovered blinks in the ink status menu.

#### Error requiring restart

An error requiring restart is displayed if a fatal operational failure such as the following occurs.

- · When an obstacle that prevents printing occurs.
- When a problem occurs with the electrical circuit (PCB, motor, sensor, etc.) of the printer.
- · When a failure in the printer control program occurs.

If an error requiring restart occurs, the printer stops operating after performing the following operations.

- 1. The drive power automatically shuts down.
- 2. All lamps on the operation panel blink, and the buzzer rings continuously.
- 3. The error message is displayed on the operation panel.

Pressing any key on the operation panel stops the beeping.

For an error requiring restart, operation will return to normal after removing the cause of the error and restarting the printer. If the same error continues to be displayed, contact the your local MUTOH dealer.

Be sure to tell us the code no. of the error message when you contact us.

Display	Description	
E***Err []	A problem that does not have a remedy has occurred.	
	<ol> <li>Remove obstacles such as paper scraps in the drive system.</li> <li>Confirm that the replaced items are correctly attached.</li> </ol>	
	3. Turn the power button off. Wait a short while, then turn the power	
	button on, to restart the printer.	



- "\*\*\*" in the error message is the code no. that indicates what type of error occurred.
- The command code representing the error occurred may be indicated in [].

### Troubleshooting

This section describes undisplayed malfunctions and failures of the printer, possible causes and countermeasures.



#### Note

- The current status and error information of your printer can be checked from the Printer Status tab > Status Information on MSM. If your printer is not operating correctly, check this Status Information first.
- Make sure to use the latest version of MSM.
   To check the latest available version, go to Help > Version > Check for updates on MSM.
   If old version is installed in your computer, download the latest version from MUTOH Club.
  - MUTOH Status Monitor Operation Manual

#### Installation and initial setup troubleshooting

Is the front cover, or the maintenance cover open?

- Close the front cover, or the maintenance cover.

# Cannot perform the initial ink charging.

Is the media loading lever raised?

- Lower the media loading lever.

Are ink cartridges / High capacity ink pack adapters inserted all the way into the printer?

- Make sure ink cartridges / High capacity ink pack adapters are all inserted properly.

# Ink does not come out after ink charging.

Nozzle missing occurs after

Is the ink too cold?

- Leave the ink at room temperature for at least three hours, and perform cleaning several times.

Is the power turned OFF during ink charging?

- Turn the power ON again and continue ink charging.

#### Did you perform head cleaning?

- Perform cleaning, then, check the print result.
- If there is no improvement in the print result even after performing cleaning, leave the printer unused for an hour or more.
- Then perform cleaning or "Little Charge" again and check the print result.
- If there is still no improvement, contact your local Mutoh dealer.

**™** "Head cleaning" P. 128

initial ink charging.

Is Ethernet cable connected correctly?

- Securely connect the Ethernet cable to the Ethernet Port.

MSM or RIP cannot access to the printer.

Are the network settings configured correctly?

- Configure the network settings correctly.

Do the printer's network settings match the computer's settings?

- Match this product's network settings with the computer side environment.

"Connecting to a Computer" P. 18, "Initial 3: IP Address" P. 100, "Initial 4: Subnet Mask" P. 101, "Initial 5: Gateway" P. 101

#### **Boot-up troubleshooting**

Does not work at all

after power activation / after loading the media. Is the power cable connected to the plug?

- Connect the power cable.

Does the AC power supply provide the specified voltage?

- Connect the cable to another outlet.

Is the front cover, or the maintenance cover open?

- Close the front cover, or the maintenance cover.

Is the media loading lever raised?

- Lower the media loading lever.

Is the media loaded correctly?

- Load the media correctly.

Is the ink cartridge / High capacity ink pack adapter inserted?

- Insert the ink cartridge / High capacity ink pack adapter.

Do you use the printer within recommended environmental conditions?

- Make sure to use the printer within the specification range.

Is there any error message displayed on MSM?

- Go to the Printer Status tab in MSM and check that if any error message is displayed in the Status Information.

"Loading the media" P. 31, "Ensuring a suitable place for installation" of the "Startup Guide" on page P.5

#### Media-related troubleshooting

Is the media loaded correctly?

- Load the media correctly.

Are there any foreign materials such as torn paper attached to Pressurizing rollers?

- Clean Pressurizing rollers.

#### The media slips, is torn / crumpled during initialization.

Do you use the printer within recommended environmental conditions?

- Make sure to use the printer within the specification range.

Are any curls or warps present on your media?

- Set the media holder at both edges of the media.
- Check that you select the appropriate vacuum fan setting.

Are you using creased, damaged, torn or curled media?

- Replace the media.



If the media is jammed or torn, remove it according to "The media is jammed".

Is the media loaded correctly?

- Load the media correctly.

Is the media loaded at an angle?

- Load the media straight.

The printer does not detect the media.

Do you use the printer within recommended environmental conditions?

- Make sure to use the printer within the specification range.

Did you load the media which has been printed before?

- Use a new media.

The loading the media... P. 31, "Inside cleaning" P. 130, "After loading the media..." P. 34, "\*\*>4: Vacuum Fan" P. 73, "The media is jammed" P. 162, "Ensuring a suitable place for installation" of the "Startup Guide" on page P.5

Do you use the printer within recommended environmental conditions?

- Make sure to use the printer within the specification range.

Are any curls or warps present on your media?

Media jams frequently occur.

- Set the media holder at both edges of the media.
- Check that you select the appropriate vacuum fan setting.

Are you using creased, damaged, torn or curled media?

- Replace the media.



If the media is jammed or torn, remove it according to "The media is jammed".

### The media skews during printing.

Is the media loaded correctly?

- Load the media correctly.

"Ensuring a suitable place for installation" of the "Startup Guide" on page P.5, "After loading the media..." P. 34, "\*\*>4: Vacuum Fan" P.

73, "The media is jammed" P. 162, "Loading the media" P. 31

#### Printing-related troubleshooting

#### The printer does not print.

Is Ethernet cable connected correctly?

- Securely connect the Ethernet cable to the Ethernet Port.

Is there any error message displayed on MSM?

- Go to the Printer Status tab in MSM and check that if any error message is displayed in the Status Information.

Are any curls or warps present on your media?

- Set the media holder at both edges of the media.
- Check that you select the appropriate vacuum fan setting.

# Smears or missing area partially appears on the prints.

Does the printer heater deform your media?

- If the heater deforms the media loaded to the printer before printing, go to the "Start Feed" menu to increase the media feeding amount.

Does the media contain moisture or are you using the creased or wrinkled media?

- Replace it with the new media.

The printing position is incorrect (some parts of the media cannot be printed on).

Printing is blurred.

Is the media loaded correctly?

- Load the media correctly.

Did you set up the origin?

- Cancel or reset the settings of the origin.

Is the media printed on the printing surface?

- Check the printing surface of the media and set it correctly.

Does the blower heater work properly?

- Check that the blower heater is set to the appropriate setting.

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

"Connecting to a Computer" P. 18, "After loading the media..." P. 34, "\*\*>4: Vacuum Fan" P. 73, "Set 17: Start Feed" P. 89, "Loading the media" P. 31, "Set 5: Origin" P. 80, "Heater Operation panel" P. 12, "\*\*>2: Adjust Print>" P. 66, "\*\*>3: PF Adjust" P. 70

Is the media loaded correctly?

- Load the media correctly.

Does the media contain moisture or are you using the creased or wrinkled media?

- Replace it with the new media.

White or black lines appear on printed media.

Are Nozzles in good condition?

- Perform Nozzle check. Then if nozzle missing is found, conduct cleaning.

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

Are Nozzles in good condition?

- Perform Nozzle check. Then if nozzle missing is found, conduct cleaning.

Did you agitate ink in the bag?

Printing lines are not straight / are duplicated or patchy.

- When "Shake XX Cartridge" message appears on the operation panel, agitate ink in the

Did you perform Print quality adjustment?

- Perform Print quality adjustment.

Did you perform Media feed adjustment?

- Perform Media feed adjustment.

Is Ink bag within the validity period?

- Use a non-expired ink bag.

"Loading the media" P. 31, "Nozzle check and cleaning" P. 44, "\*\*>2: Adjust Print>" P. 66, "\*\*>3: PF Adjust" P. 70

#### Are Nozzles in good condition?

Perform Nozzle check.
 Then if nozzle missing is found, conduct cleaning.

#### Printed color is not accurate.

## Did you install an ink bag on each High capacity ink pack adapter with correct ink color of S/C card?

- Check that the ink color written on S/C card matches the ink color of ink bag installed on each High capacity ink pack adapter.
- If it does not match, contact your local Mutoh dealer.

#### Did you agitate ink in the bag?

- When "Shake XX Cartridge" message appears on the operation panel, agitate ink in the bag.



If variations in color on the print is noticeable, set the Color Maintenance function to ON.

# Nozzle missing remains after head cleaning.

Is there any ink stains or deposits on the cleaning wiper or circumference of the print head?

- Perform head cleaning or "Little Charge" again and check the nozzle check print.
- Perform Daily Maintenance and check the nozzle check print.
- The problem still persists, contact your local Mutoh dealer.

#### Did you select an appropriate cleaning setting?

- If nozzle missing still persists after attempting Normal Cleaning or Long Cleaning two or three times, perform "Little Charge".

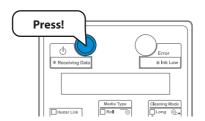
"Nozzle check and cleaning" P. 44, "Maintenance 5: Color Maintenance" P. 98, "Daily Maintenance" P. 116, "Menu 5: Cleaning" P. 94

### The media is jammed

When the media is jammed in the printer, follow the procedure below to remove it.

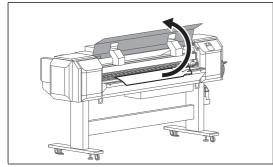
#### Steps





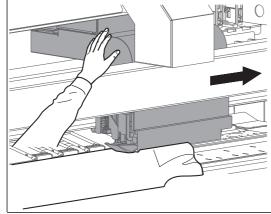
Turn the printer OFF.





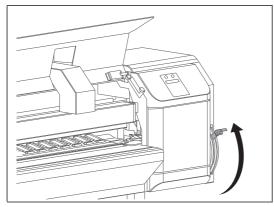
Open the front cover.





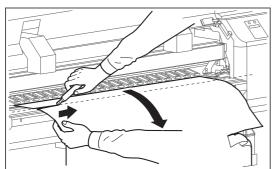
Move the carriage from the top of the media.





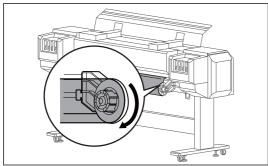
Raise the media loading lever.

[5]



Pull the media towards you, and cut the torn part with cutting tools such as a razor blade.

[6]



Rewind the media a little by rolling Flange on Roll media holder.

- [7] If paper dust or pieces of paper remain inside the printer, remove them.
- [8] Turn the printer ON.
- [9] Put the printer into the daily maintenance mode and clean the head strike prevention sensor and around the print head.
  - The printer into the Daily maintenance mode" P. 126, "How to clean the head strike prevention sensor" P. 123

If any defect is found on the head strike prevention sensor or print head, please contact your local MUTOH dealer.

- Perform Nozzle Check. [10]
  - **™** "Nozzle check and cleaning" P. 44
  - If there is nozzle missing, go to "Cleaning steps" P. 46.
  - If all lines are clearly printed, you can start printing.

# Specifications of this product

### List of specifications

Model Name		VJ-1628MH
Print method		On demand piezo method
Drive method		Firmware servo / DC motor drive
Media feed method		Multipoint pressurizing Grid roller system
Media fixing system		Pressurization roller down system by manual lever
Conditions of usable media	Roll media	Outer diameter: Φ150 mm or less
		Tube diameter: 2 inches or 3 inches
		Weight: 30 kg or less
	Rigid media	Maximum length: 1,200 mm
		Minimum length: 200 mm
		Weight: 15 kg or less
	Roll / Rigid media	Maximum width: 1,625 mm
		Minimum width: 182 mm
		Maximum thickness: 16 mm (warpage of less than 1 mm)
Maximum print width		1,615 mm
Maximum print length		200 m
Media cut system		Horizontal manual cut system
Head height adjustment		Automatic height adjustment
CPU		64bit RISC CPU
Memory		384 MB
Interface		Ethernet (10BASE-T / 100BASE-TX)
Waste fluid tank		Fixed to the body type, capacity 2,000 ml, waste fluid discharge by users

Ink	Color	4-color (Black, Cyan, Magenta, Yellow)
		5-color (Black, Cyan, Magenta, Yellow, White, Cleaner)
		7-color (Light color) (Black, Cyan, Magenta, Yellow, Light Cyan,
		Light Magenta, Light Black, Cleaner) 7-color (OGB) (Black, Cyan, Magenta, Yellow, Orange, Blue,
		Green, Cleaner)
		8-color (Light color) (Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta, Light Black, White)
		8-color (OGB) (Black, Cyan, Magenta, Yellow, Orange, Blue, Green, White)
	Туре	220 ml ink cartridge, 500 ml ink bag (Orange, Green and Blue are only available in 220ml)
Environmental conditions	Printer Operation Environment	Temperature 20 to 28 °C, humidity 40 to 60% No condensation
	Printer Accuracy Guaranteed Environment	Temperature 22 to 28 °C, humidity 40 to 60% No condensation
	Printer Storage Environment	Storage without ink charging: up to 6 months Temperature -20 to +60 °C, humidity 20 to 80% No condensation
		Storage with ink charging: up to 30 days (Perform the Daily Maintenance in the operation manual) Temperature 5 to +30 °C, humidity 20 to 80% No condensation
Power supply	Printer	Voltage: AC 100V to 240V ±10%
specifications		Frequency: 50/ 60Hz ±1Hz
		Capacity: No less than 3 A
	Blower Heater	Voltage: AC 100V to 120V ±10% / AC 200V to 240V ±10%
		Frequency: 50/ 60Hz ±1Hz
		Capacity
		• Heater 1: No less than 10 A (AC 100V to 120V)
		<ul> <li>Heater 1: No less than 10 A (AC 200V to 240V)</li> </ul>
		• Heater 2: No less than 10 A (AC 100V to 120V)
		Heater 2: No less than 0 A (AC 200V to 240V)
Power consumption	Power off	1.0 W or below
	Standby	Printer: 40 W or below Blower Heater: 25.4 W or below
	Warming up	Printer: 40 W or below Blower Heater: 2,400 W or below
	Operation	Printer: 300 W or below Blower Heater: 2,200 W or below
Current consumption	100V to 120V	18.0 A or below

External dimensions	Height	1,302 mm (Size of printer when the front cover is opened: 1,529 mm)
	Width	2,698 mm
	Depth	818 mm (When the media-feed table is installed: 2,730 mm)
Weight	Main body	168.6 kg
	Stand	33 kg

# Options / Supply list

For more information about the options and the supply items, contact your local MUTOH dealer.

## Revision History

Date	Version	Manual code	Supported Firmware
2021.1	00	VJ1628MHE-A-00	V.1.00
2021.7	01	VJ1628MHE-A-01	V.1.02
2022.8	02	VJ1628MHE-A-02	V.1.03
2022.11	03	VJ1628MHE-A-03	V.1.04
2023.4	04	VJ1628MHE-A-04	V.1.05
2024.3	05	VJ1628MHE-A-05	V.1.07
2025.10	06	VJ1628MHE-A-06	V.1.12 or later

# **MUTOH**